

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE	PAGE OF PAGES 1 131
2. AMENDMENT/MODIFICATION NO. 0010	3. EFFECTIVE DATE 2/12/2007	4. REQUISITION/PURCHASE REQ. NO. IGC	5. PROJECT NO. (If applicable)
6. ISSUED BY DLA Contracting Services Office (DCSO) – Philadelphia 700 Robbins Avenue Philadelphia, Pa. 19111-5092 Brian Dudek, Phone (215) 737-5872 FAX: (215) 737-7942	CODE SP0103	7. ADMINISTERED BY (If other than Item 6)	CODE

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State, and Zip Code)	(x)	9A. AMENDMENT OF SOLICITATION NO.
		9B. DATED (SEE ITEM 11)
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE OEBC6	FACILITY CODE	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[X] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers [] is extended, [] is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

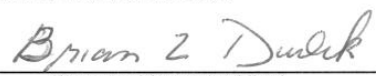
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(x)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor [X] is not, [] is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

The purpose of this amendment is to summarize most recent changes to the RFQ. See attached pages delineating the changes.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Brian Dudek	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)	16C. DATE SIGNED 02/12/2008
(Signature of person authorized to sign)			

RFQ Paragraph/Section	Description of RFQ Change	Amendment #
4.5.2	Clarified statement regarding travel reimbursement and moved pg. 35 paragraphs above table to consolidate travel pricing text.	Amendment 0010
4.5.6, Checklist table	Removed statement from Volume III entries in checklist indicating resumes are optional for FADs.	Amendment 0010
PWS Paragraph/Section	Description of PWS Change	Amendment #
Table 2.5-8	Added JOPES	Amendment 0010
2.8, pg. 95	Inserted missing header and footer.	Amendment 0010
Appendix D	Removed Test and Evaluation Master Plan template.	Amendment 0010
Appendix D	Removed Requirements Traceability Matrix template.	Amendment 0010
Appendix D	Replaced Software Requirements Specification” template with “Requirements Specification” template.	Amendment 0010
Appendix D	Updated “Functional Specification” template.	Amendment 0010
Appendix D	Updated “Design Specification” template.	Amendment 0010
Appendix D	Replaced “Training Materials” templates with “Training Plan” template.	Amendment 0010
Appendix D, Developer’s Guide	Changed to “Initial Draft delivered 90 days after Contract award (DACA)”.	Amendment 0010
Appendix D, Interface Design Description Document	Changed to “Initial Draft for each source system delivered NLT 30 days after completion of the Functional Phase - Updates as required”.	Amendment 0010
Appendix D, Knowledge Transfer Plan	Changed to “Initial Draft delivered NLT 30 DACA - Updates as required”.	Amendment 0010

Appendix D, Integrated Master Schedule	Changed to “Initial Draft delivered NLT 30 DACA - Updates as required”.	Amendment 0010
Appendix D, Quality Assurance Plan	Changed to “Initial Draft delivered NLT 90 DACA”.	Amendment 0010
Appendix D, Technical Report	Changed to “Within 5 days of the completion of a Government directed analysis, assessment, or review”.	Amendment 0010
Appendix D, Test Plans and Procedures	Changed to “45 days prior to each testing activity”.	Amendment 0010
Appendix D, Configuration Management Plan	Changed to “Initial Draft delivered NLT 45 DACA . Updates as required”.	Amendment 0010
Appendix D, Risk Management Plan	Changed to “Initial recommendations delivered NLT 30 DACA - Updates as required”.	Amendment 0010
Appendix D, Systems Security Authorization Agreement/Application System Security Plan	Changed to “Updates submitted NLT 30 days after completion of significant changes to the security architecture”.	Amendment 0010
Appendix D, Training Plan	Changed to “Initial Draft delivered at close of development phase.”	Amendment 0010
Appendix D, Requirements Specification	Changed to “Initial Draft for Spiral 1 delivered NLT 30 DACA; future SRS to be delivered 30 days after receipt of the Government’s Capabilities Production Specification (CPS)”.	Amendment 0010
Appendix D, Information Assurance & Industrial Security Plan	Changed to “Initial Draft delivered NLT 30 DACA. Updates as required”.	Amendment 0010

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Request For Quote –GSA E-BUY RFQ # 258610

the Government ROM. Vendors should note that the Government will require the successful vendors to follow invoice instructions for payment where funding is derived from different sources (i.e., USTRANSCOM and DLA).

In accordance with FAR 8.404(b) (5), vendors are encouraged to propose discounts off their existing FSS labor category hourly rates that comprise the total solution. Offered discounts will be applied to labor categories and during the entire IGC period of performance covering all Increments.

4.5.2 Pricing for Travel Expenses

The vendor's proposal for the fixed price components of Task Areas I-II shall include travel costs. All travel related expenses shall be in accordance with the JTR (per diem, airfare, etc.). For those components of Task Area I and III, that are to be priced in accordance with Government ROMs, travel requirements will be specified in future PWS's and vendor's proposals for those requirements will include travel expenses. The vendor shall refer to the table below for potential travel locations. The locations listed in the table below are estimated and are subject to change.

Scott AFB, IL and Fort Belvoir, VA are considered as IGC "base" sites. Travel costs shall only include travel originating from an IGC base site. The Vendor shall not propose travel costs to accommodate travel associated with proposing team members who must travel from current contractor location to an IGC base site in order to support the requirements associated with this request. These costs shall be borne by the vendor.

The locations listed in the table below are estimated and are subject to change.

Travel Requirements for Task Area IV are to be identified within individual performance work statements issued for each requirement under FAD BPA. It is anticipated that all task orders issued as a result of Task Area IV will be fixed price and include any necessary travel component.

Note: The vendor shall not propose prices for travel costs within the Washington, D. C. Metropolitan area, nor the St. Louis, MO Metropolitan area (inclusive of Scott, AFB, IL) nor propose any price for travel within their local area.

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ESP BPA ESTIMATED TRAVEL

Location
DISA Sites
DECC, Mechanicsburg, PA
DECC Ogden, UT
USTRANSCOM Sites
Military Sites:
DAASC, WPAFB, OH
DLIS, Battle Creek, MI
DSCR, Richmond, VA
DSCP, Philadelphia, PA
Hill AFB, Ogden, UT
DSCC, Columbus, OH
Source System Sites (as required)
Army (TBD)
Navy (TBD)
Air Force (TBD)
Marine Corps (TBD)

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IGC RFO Checklist			
Item	ESP	FAD	Comments
Teaming Arrangement	At least 1 teaming partner	Not required	
Socio-Economic Percentage	30% per section 1.7	Not required	
Pricing	♦	♦	
Task Area 1	♦	♦	
Planning & Transition	FFP	N/A	Contract Award - 30 SEP 08
Management & Integration (PWS Section 2.3)	FFP	N/A	1 OCT 08 - 30 JUN 13, by Year
Spiral 1	FFP	N/A	
Spiral 2	ROM	N/A	Mapped to labor categories per Addendum D
Spiral 3	ROM	N/A	Mapped to labor categories per Addendum D
Task Area 2	FFP	N/A	1 OCT 08 - 30 JUN 13, by Year
Task Area 3	ROM	N/A	For 10 notional tasks per year; 1 OCT 08 - 30 JUN 13, by Year; Mapped to labor categories per Addendum D.
Task Area 4	N/A	ROM	For 10 notional tasks per year; 1 OCT 08 - 30 JUN 13, by Year; Mapped to labor categories per Addendum D.
Period of Performance (POP)	5 years	5 years	Thru 30 JUN 13
Key Personnel	♦	♦	
Program Manager	Resume Required	N/A	
Project Manager	Resume Required	Resume Required	
Systems Engineer (Security) SSE	Resume Required	N/A	
Information Security Specialist (Lead)	Resume Required	N/A	
Senior Functional Analyst	Resume Required	Resume Required	
Lead Software Developer (Teradata Developer)	Resume Required	N/A	
Lead Software Developer (Business Objects)	Resume Required	Resume Required	
Lead Software Developer (Informatica)	Resume Required	N/A	
Engineering (Lead)	Resume Required	Resume Required	
Lead Software Developer (WebMethods)	Resume Required	N/A	
Key Personnel Have Adjudicated Secret Clearance	Yes	Yes	
Proposals Due	22-Feb-08	22-Feb-08	
Proposal Page Limit	♦	♦	
Volume I - Cover Letter and Executive Summary	3 pages	3 pages	15 Copies & one CDROM; 4 copies must have original signature
Volume II - Technical & Proposal	50 pages	30 pages	15 Copies & one CDROM
Volume III - Management	50 pages (not including actual resumes)	15 pages (not including actual resumes)	Resume form required for each person designated as key personnel but the resumes are not included in the page count; 15 Copies & one CDROM
♦ Resumes	2 pages per resume max	2 pages per resume max	
Volume IV - Corporate Experience & Past Performance	10 page narrative (not including the actual references)	5 page narrative (not including the actual references)	Qualifications form required for each reference cited but the forms are not included in the page count; 15 Copies & one CDROM
♦ Past Performance	3 - 5 references based on template (no page limit)	3 - 5 references based on template (no page limit)	
♦ Teaming partners Past Performance	1 reference for each teaming partner based on template (no page limit)	Optional	
Volume V - Pricing	No page limit	No page limit	6 Copies & one CDROM
Oral Presentation	26, 27, or 28 FEB (TBD)	N/A	
Oral Presentation Slides Due	22-Feb-08	N/A	20 copies & one CDROM
Time set aside for Orals	3 hours	N/A	

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Table 2.5-8 – Customer Systems Interfaces

SYSTEM	SYSTEM DESCRIPTION	PROPONENT	CLASS
AEPS	Army Electronic Products Support Team	US Army	U
AMST	Agile Munitions Support Tool	US Army	U
AV	Asset Visibility	DLA	U, S
CINC21	Commander-In-Chief 21	PACOM	U, S
CUSTOMS PROCESS AUTOMATION (CPA)	Europe/ Korea	USTRANSCOM	U
DAASC/LMARS	Defense Automatic Addressing System Center	DLA	U
GCCS	Global Command and Control System	JCS	S
GCSS COP	Global Combat Support System	JCS	S
GDSS	Global Decision Support System	AMC	U, S
JOPEs	Joint Operational Planning and Execution System	JCS	S
MIDAS	Model for Inter-theater Deployment by Air and Sea	USTRANSCOM	U
NAVICP	Navy Inventory Control Point	US Navy	U
NAVSUP	Navy Supply System	US Navy	U
NAVTRANS	Navy Transportation	US Navy	U
OIS	Navy Ordnance Information System	US Navy	U
ONE TOUCH	Navy Program	US Navy	U
PMO	Priority Material Office	US Navy	U
SALTS	Streamlined Automated Logistics Transmission System	US Navy	U
SMS	Single Mobility System	USTRANSCOM	U, S

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2.8 Task Area IV: Front-end Application Development

Task Area IV establishes the FAD requirements for future application development technical services required to support the development of front-end applications (applications not required for the retirement of GTN) using the IGC environment. The FAD shall build these capabilities using ESP-provided Developer Guides. As part of each active Task Order, FADs shall provide provisional support to the BI COE as defined in paragraph 2.4.8.

A separate BPA for the Task Area IV performance based tasks will be awarded to multiple Contractors who are not part of the ESP Teaming Arrangement under BPA #1. Task Orders for front-end application development under Task Area IV will be competed among these Contractors.

The Government will issue incremental performance based fixed-price Task Orders for the performance of Task Area IV under a separate BPA. Required backend support will be provided by the ESP under Task Area III.

Based on the interdependencies between the front-end applications and back-end infrastructure, Task Orders issued for development of new applications will likely include a corresponding ESP Task Area III task order. These task orders are intended to direct the ESP to provide the selected FAD with knowledge transfer (as described in paragraph 2.3.11.1) and deployment support required to facilitate the application development activities.

The FAD shall apply the system engineering methodology described in Section 2.4 to all development work performed in Task Area IV. The FAD may propose, for Government approval, recommendations to facilitate improvement of the system engineering processes in accordance with industry best practices.

2.8.1 Strategy/Vision

- To achieve agility in satisfying Warfighter requirements the Government is building the IGC program. The program consists of two main parts: the first, achieves data integration and interoperability in conjunction with the sun setting of GTN. The second strives to deliver rapid war-fighting capability leveraging the IGC architecture and enterprise services.
- The FAD delivers the war-fighting capability through the development of IGC front-end applications. The main goal is to acquire Warfighters requirements rapidly and deliver these robust solutions on an incremental and focused basis. Each FAD works in unison with the BI COE to leverage GFI/GFE business intelligence tools and IGC-established processes to meet these Warfighter requirements. The BI COE will provide continuity across disparate infrastructure, services and application development activities. Data integration activities and the acquisition of additional source data will be provided by the ESP to support FAD application development.

2.8.2 Task Order Management

If a FAD receives a Task Order for front-end application development, the following process and requirements must be met. The FAD shall document their strategy for performing the front-end application development activities outlined in this Task Area in the IPMP described in

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Appendix D – IGC Deliverables Templates

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INTRODUCTION AND INSTRUCTIONS

Appendix D provides a consolidated list of the Contract Data Requirements (CDR) associated with the tasks specified in the IGC Performance Work Statement (PWS). Each deliverable within this Appendix includes a reference to one or more PWS requirements that direct the work activities required to generate the deliverable. The Government maintains unlimited data rights as provided by the DFARS (DFARS Clause 52.227-7013 - "Rights in Technical Data - Noncommercial Items" -- Incorporated by reference in full) for all data generated under this contract. The Contractor shall provide the Government unrestricted access to data stored in Contractor managed repositories at no additional cost."

In addition, the following DFARS Clauses are also incorporated by reference, in full:

DFARS 252.227-7016 "Rights in Bid or Proposal Information"

DFARS 252.227-7030 "Technical Data - Withholding of Payment"

DFARS 252.227-7037 "Validation of Restrictive Markings on Technical Data".

The Contractor shall submit each contract data deliverable to the points of contact specified by the designated Government designated Contracting Officer Representative (COR). The COR will facilitate internal Government review, submission of comments to the Contractor, and Government acceptance of each deliverable. The Contractor shall address questions, requests for clarification, and proposed changes to the submission schedule for contract deliverables to the COR. The Contractor shall designate primary and alternate points of contact who are responsible for coordination of deliverables with the COR.

This Appendix provide instructions to Contractors performing services under this contract on their responsibilities for preparation (i.e., content requirements, distribution and sensitivity markings, media, etc.) and submission (i.e., delivery schedule, frequency of submittals, quantities, etc.) of each deliverable. The following paragraphs provide general CDR instructions that apply to generation and submission of all deliverables.

I. Format:

The Government templates within this Appendix were intended to establish minimum content requirements and not to define the format for contract deliverables. The Contractor shall, in coordination with the Government, establish formats for specific deliverables as part of the work activities required to generate each deliverable. While deliverable format requirements have not been established it is important to remember that establishing a consistent presentation of information will provide continuity between projects and expedite Government review and approval of Contractor deliverables. The Contractor shall not employ a media that is not supported by the Government or that would require Government purchase of additional licenses. The following information is provided as general format and preparation guidelines that should be applied to enhance the organization, readability, flow, and distribution of contract deliverables.

- a. Automated techniques. Use of automated techniques is encouraged.
- b. Alternate presentation styles. Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required can be made more readable using these styles.
- c. Title page or identifier with signature blocks. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation,

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and any other identifier for the systems, subsystems, or items to which the document applies; contract number; organization for which the document has been prepared; name and address of the preparing organization; distribution statement; and signature blocks for the developer representative authorized to release the document, the acquirer representative authorized to approve the document, and the dates of release/approval. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.

d. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.

e. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.

g. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph may be written as multiple paragraphs or subparagraphs to enhance readability.

h. Standard data descriptions. If a data description has been published in a standard data element dictionary specified in the Contract, reference to an entry in that dictionary is preferred over including the description itself.

i. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

j. Executive Summary. Maximum of two pages that briefly describe the content.

k. Page-based products. For which Contractor format is acceptable.

l. Standard digital data. Compliant with the content and format requirements specified in the DOD Data Architecture (DDA) and the Defense Data Dictionary System (DDDS).

m. Each deliverable will address the applicability of the following format attributes:

- Delivery media: Digital files (soft copy) on optical media (CD or DVD) are preferred; paper (hard copy) may be requested by the Government;
- File type: Microsoft Office (e.g., Microsoft Word, Excel, PowerPoint, Project, etc.), ERwin, etc.;
- Contractor format is acceptable unless otherwise specified within a deliverable template;
- Page size is to be 8.5 x 11 (standard letter) unless otherwise specified or if required by the tool producing the deliverable;
- Font & Size is to be Times New Roman 12 pitch unless otherwise specified or if required by the tool producing the deliverable;
- Line spacing is to be single unless otherwise specified or if required by the tool producing the deliverable;
- Margins are to be 1 inch unless otherwise specified or if required by the tool producing the deliverable; and

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- Hyperlinks may be used provided it is assured that all users are able to access the linked resource.
- n. File naming conventions:
 - Filename for drafts – program name_product/document name_date (yearmonthday)_Draft V0.x. (e.g., IGC_Capabilities Production Document_070319_Draft V0.3.)
 - Filename for final products - program name_product/document name_date (monthyear)_Vx.x (e.g., IGC_Capabilities Production Document_March 2007_V1.0.)

II. Content:

Contract data templates are provided as part of this Appendix that establish the minimum content requirements for each deliverable and to ensure standardization and consistency in contractor submissions. Additional content requirements are defined as part of the discrete PWS tasks associated with each deliverable. The Contractor shall ensure that each deliverable provides the information specified in the template and associated PWS task references. These requirements will serve as the basis for Government review and approval of contractor deliverables.

III. Distribution, Sensitivity and Classification Markings:

Distribution statements are defined in DoD Directive 5230.24, Distribution Statements on Technical Documents and provide instructions on release of technical information acquired under this contract. Unless otherwise specified, the Contractor shall apply Distribution Statement D¹ to each IGC deliverable and ensure appropriate controls are implemented to prevent distribution of IGC technical information outside of DoD without prior consent of the Government.

The Contractor shall also affix appropriate sensitivity and classification markings (i.e., For Official Use Only (FOUO), SECRET, etc.) to each deliverable in accordance with requirements defined in DoD 5200.1-R, Information Security Program. These markings shall be applied based on the sensitivity and classification of information within each document. The Contractor shall ensure appropriate measures are applied to ensure protection of sensitive and classified deliverables during development and submission.

IV. Delivery Schedule and Submission Frequency:

The delivery schedule and submission frequency for each deliverable are defined in the following Table of Reference. This schedule is based on the days preceding or following a specific contract events or activities defined in the PWS. The Contractor shall translate and document the contract data delivery schedule within the IMS.

The Contractor shall submit a draft for Government review and comment for those contract deliverables requiring Government approval. Unless otherwise specified the Contractor shall allocate ten (10) workdays for Government review and submission of comments. The Contractor shall deliver the final version with incorporated changes within five (5) workdays after receipt of Government comments. An accelerated submission and review schedule may be negotiated between the Contractor and Government for recurring submissions and document updates.

¹ Distribution Statement D - Distribution authorized to the Department of Defense and U.S. DOD Contractors only. Other requests shall be referred to the IGC PMO.

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TABLE OF REFERENCES

CONTRACT DELIVERABLES	PWS PARAGRAPH REFERENCES	FREQUENCY & DELIVERY SCHEDULE
Software Design Description	2.4.3; 2.4.3.1; 2.4.3.2	As Required Initial Draft NLT 30 days prior to CDR. Updates NLT 15 days prior to implementation of proposed change.
Developer's Guide	2.2.1; 2.3.2; 2.4.7; 2.4.8; 2.5	Initial Draft delivered 90 days after Contract award (DACA) Updates as required
Functional Specification	2.4.2; 2.4.2.1; 2.4.2.2; 2.4.3; 2.4.3.1; 2.4.5; 2.4.5.5; 2.4.5.6; 2.5.22.6.1.2; 2.6.1.4; 2.7.1.3	Initial Draft delivered prior to PDR. Updates as required
Interface Design Description Document	2.4.2	Initial Draft for each source system delivered NLT 30 days after completion of the Functional Phase Updates as required
Knowledge Transfer Plan	2.3.11.1; 2.6	Initial Draft delivered NLT 30 DACA Updates as required
Meeting Agenda/Meeting Minutes	2.3.2	Meeting Agenda to be distributed NLT two business days prior to the event (one week if required participants must travel). Meeting Minutes to be distributed NLT two business days following the event.
Monthly Status Report	2.3.1; 2.6.1.1; 2.7.1.1	Upon commencement of Contract activity, due NLT the 7 th of the following month.

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CONTRACT DELIVERABLES	PWS PARAGRAPH REFERENCES	FREQUENCY & DELIVERY SCHEDULE
Integrated Program Management Plan	2.3.1, 2.5.1.1, 2.5.1.2, 2.6.1.1, 2.7.1.1	Initial Draft delivered NLT 30 DACA Updates as required
Integrated Master Schedule	2.3.1, 2.4.6, 2.4.7, 2.5.1.2, 2.6.1.1, 2.7.1.1, 2.8.3	Initial Draft delivered NLT 30 DACA Updates as required
Quality Assurance Plan	2.3.9	Initial Draft delivered NLT 90 DACA
Technical Report	2.3.10, 2.5.2	Within 5 days of the completion of a Government directed analysis, assessment, or review
Test Plans and Procedures	2.4.5	45 days prior to each testing activity
Test Scripts/Specialized Scripts	2.4.4.1	Prior to TRR.
Test Report	2.4.5	NLT two business days following the close of each test phase.
Implementation Plan	2.4.6	Not later than 60 days prior to proposed implementation.
Configuration Management Plan	2.3.5	Initial Draft delivered NLT 45 DACA Updates as required
Risk Management Plan	2.3.8	Initial recommendations delivered NLT 30 DACA Updates as required
Systems Security Authorization Agreement/Application System Security Plan	2.3.4, 2.5.2, 2.7.1.4	Updates submitted NLT 30 days after completion of significant changes to the security architecture
Training Plan	2.3.11, 2.3.11.1, 2.3.11.2, 2.4.3, 2.5.1.1, 2.6.1.10, 2.7.1.7, 2.7.1.10	Initial Draft delivered at close of development phase.
Requirements Specification	2.3.7, 2.4.1, 2.4.1.1, 2.4.2.1, 2.4.3, 2.4.5	Initial Draft for Spiral 1 delivered NLT 30 DACA; future SRS to be delivered 30 days after receipt of the Government's Capabilities Production Specification (CPS)
Version Description Document	2.3.5	To be delivered with each software release.

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CONTRACT DELIVERABLES	PWS PARAGRAPH REFERENCES	FREQUENCY & DELIVERY SCHEDULE
Information Assurance & Industrial Security Plan	2.3.4	Initial Draft delivered NLT 30 DACA Updates as required

REQUIREMENTS SPECIFICATION

Requirements Specification Template

INTEGRATED DATA ENVIRONMENT & GLOBAL TRANSPORTATION NETWORK CONVERGENCE (IDE/GTN Convergence) *REQUIREMENTS SPECIFICATION TEMPLATE*



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Instructions

Introduction

The requirements specification shall be completed during the requirements phase. The requirements specification shall document to a sufficient degree all business requirements required for a proposed solution. During this time all requirements should be gathered, regardless of whether or not they can be met. This requirements specification shall be referred to and utilized as an input to the requirements traceability matrix.

This document should be considered a living document throughout the course of an activity and should be placed under configuration management. Upon completion of the requirements phase the contractor will conduct a requirements review where the requirements specification and requirements traceability matrix will be signed off, signifying government acceptance of the documents.

Objective

The primary goal of building the requirements specification is to document the specific business requirements and capabilities being requested by the customer. The contractor shall take the GFI high-level Business Requirements provided by the IGC PMO and break these requirements into discrete detailed requirements.

These detailed requirements shall be used as source material in the design of the data structures, application capabilities, reporting capabilities, and overall functionality expected from the integration of system data and/or functional area data into the existing and evolving IGC enclave of systems.

Principles

Upon completion of the Requirements Specification the contractor shall be able to clearly demonstrate a detailed understanding of customer required capability, how that capability is planned to function, and what data is required to satisfy the requested solution. Authoritative data should be identified during this phase for each data source and element, assess whether or not the required data exists internal/external to the IGC enclave, and whether the data is derived internally/externally.

If during the requirements phase short falls in the tools/services being provided by IGC are identified, it shall be communicated as soon as possible to the Government.

Configuration Management

The requirements specification upon approval during the formal Requirements Review shall be placed under configuration control by the Government.

**Integrated Data Environment/Global Transportation Network Convergence (IGC)
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Requirements Specification Sign-off Sheet

Approved by:	
Government Sponsor / Customer	Date
Comments:	
IGC Integration Lead	Date
Comments:	
IGC Architecture Lead	Date
Comments:	
IGC PMO Lead	Date
Comments:	
Systems Integrator Lead	Date
Comments:	
Systems Provider Lead	Date
Comments:	

**Integrated Data Environment/Global Transportation Network Convergence (IGC)
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Requirements Specification Document

Purpose

Enter the purpose of this Activity and Phase in relation to the capability being developed/integrated/enhanced. This should describe the “high-level” benefits to the DLA/USTRANSCOM-Enterprise (COCOM 57, CINC 129, Business Threads, etc.) that this project will deliver upon completion

Reference Materials

Document any related reference materials and the location. For example:

- ❖ DoD 8320.2
- ❖ Information Data and Management Strategy Policy (IDMS March, 2004)
- ❖ DoD Guidebook
- ❖ Etc.

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Requirements Volatility Matrix

To track a project effectively a requirements volatility matrix should be maintained and used during normal reporting cycles with the IGC Integration Leads. This helps the government track progress from cradle to grave, and allows the IGC PMO to get involved earlier in the requirements phase if troubles are encountered. This also assists in solidifying requirements, and preventing requirements creep.

Requirement	Number	Date	Action	Comments
IIII.XXXX.NNNN	N	MM/DD/YYYY	Example	Example Comments
I.CBIS.0001	1	02/20/2005	Created	CBIS Long Lines of Accounting report to track missing ledge balances, report will be run monthly.
I.CBIS.0001	2	02/25/2005	Modified	Customer has asked that report now be run daily, and to include filter criteria by MAJCOM

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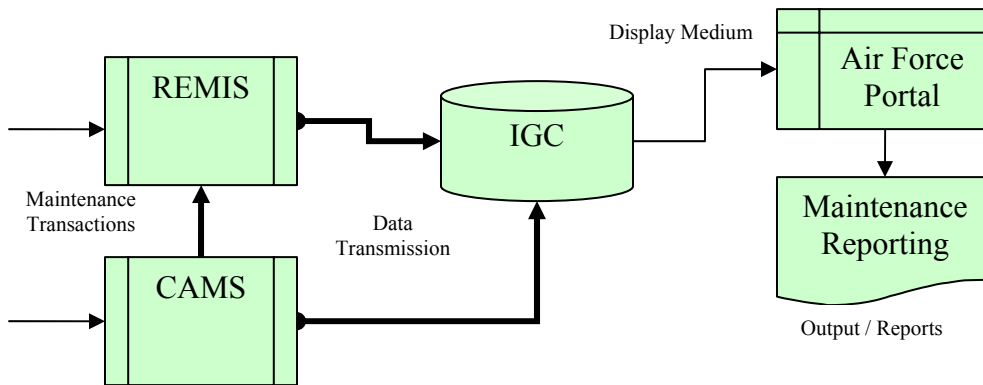
1.0 – Systems and Processing Flow Requirements

Create a Systems Diagram and Process Flow diagram to describe how the business processes align to or interact with existing systems or processes within the enterprise.

Systems Diagram

The Systems Diagram starts with the major input(s), describes the high-level interfaces between the systems, and ends with the major output(s). Present a pictorial view of the detailed process.

Systems Diagram Example:



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1.1 Process Flows

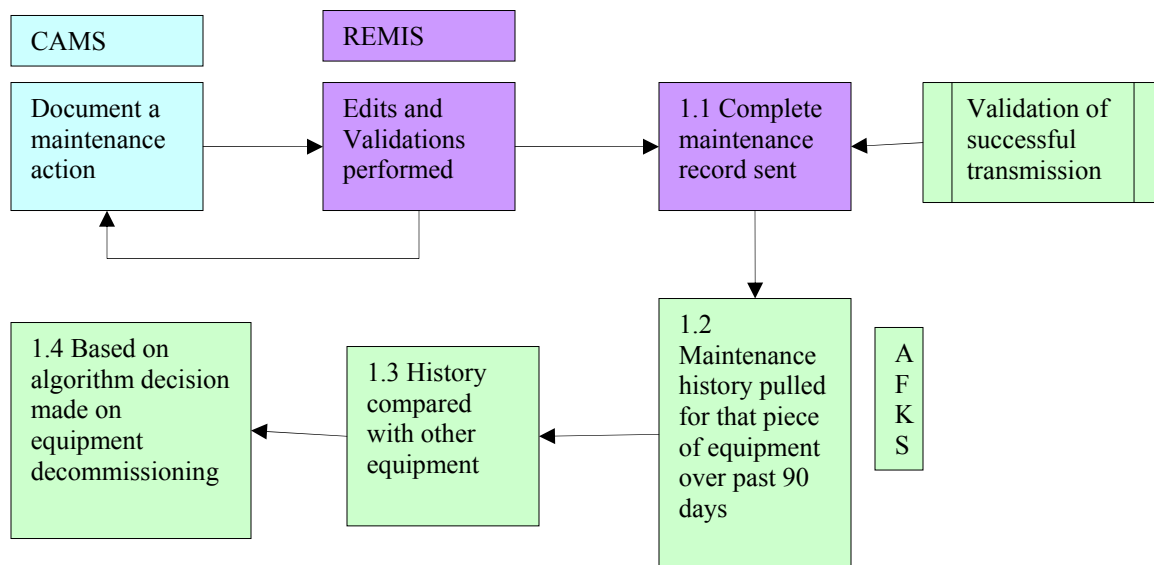
Process flows are a key to mapping capabilities to solutions. During the requirements phase the requested capabilities should be mapped to specific processes. The processes should be documented and then diagrammed. This helps track value to the Air Force Enterprise in showing capabilities being delivered and how the capability upon completion shall benefit the War fighter

The process flow diagram upon completion will assist the architecture team map the Air Force Operations Support Enterprise Architecture (OSEA) down to the specific capability being delivered.

In the case of a data set being acquired if the function / business thread already exists in IGC the process flow diagram shall begin at the sub-function / domain level for processes.

All capabilities being requested during the requirements phase should be mapped to a process. Build the process flow diagrams showing the connections among other processes/systems being requested and in conjunction with existing processes. Typically it is best to build these diagrams at a high level and then drill on each high level process until they can be used to define the required functionality necessary for the capability. Identify in the diagram whether the processes exist or whether they will have to be built to support the requested capability.

Process Flow Diagram Example:



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1.2 User Matrix

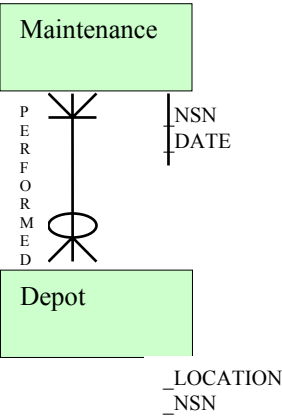
Define the users utilizing each action for each process identified in the Process Flow Diagram. For each user identify process usage. The portfolio managers can utilize this to determine if process or organizational changes are required to support the solution.

Action/User Example:

USER	ACTION			
	1.1 Complete maintenance record sent	1.2 Maintenance history pulled for 90 days	1.3 History compared with other equipment	1.4 Decommissioning schedule identified
Crew Chief	X	X		
Avionics Tech		X	X	
Flight Line Superintendent			X	
Maintenance Squadron Officer				X

1.3 Entity Relationship Diagram

This section should be built to allow the process delivering to be shown as entities. Be sure to diagram the entities, attributes, relationships, and the corresponding definitions, placing the definitions in an ERD Definitions Table. This diagram will be utilized during the Functional Phase to create the Logical Data Model.



ERD Definitions Table

Entity Name	Definition

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2.0 – Capability Requirements

This section is used to describe the requested capabilities the customers require for a complete solution. This section includes:

- ❖ New capability requests
- ❖ Modifications to existing capabilities
- ❖ Data Accessibility Requirements (DARs)

1. As the starting point for preparing the Business Requirements Section, use the information previously document in Section 1.0 Processing Flows and Requirements.

Recommended Requirement Template

1.	Reqt Number	
2.	Requirement	
3.	Description (incl. references, business rules, data elements, authoritative data sources, validation, error handling)	
4.	Priority	
5.	Business Process	
6.	Owner / Contact	

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The basic information elements of a complete requirement

1.	Requirement Identifier	A unique abbreviation and number that represents the requirement. The abbreviation and number should conform to an IIII.ABCD.NNNN format, where I is the specific identifier of the Activity, ABCD is an abbreviation for the specific activity on contract, and NNN is a unique number. The number identifies the requirements throughout its life cycle. This identifier shall be loaded into the Requirements Traceability Matrix and should not be changed once created. Example (I.CBIS.0001, III.AFEM.0001, etc.)	
2.	Requirement	A clear description of what is to be completed. This requirement should lay out in simple terms what the customer wants.	
3.	Description (incl. references, business rules, data elements, authoritative data sources, validation, error handling)	The description should lay out in detail what needs to be completed to have a requirement successfully met for the customer. The below information are some of the entities to bear in mind when creating the detailed description.	
		Straightforward	The description should be straight forward so as to provide a clear explanation of what the customer is expecting
		Inclusive	The description should be inclusive listing all entities and attributes required to complete the requirement. This includes identifying authoritative data sources, location, and relationships.
		Pedigree	Each requirement should be able to be mapped back to the original problem the customer is trying to solve
		Realistic	The requirement should take into account whether or not the requirement can be met with the current technology, processes, environment offered currently though IGC. If a requirement is found to be unsupported under the current enclave this should be communicated to the customer and the IGC PMO as soon as possible.
4.	Priority	Each requirement should be assigned a priority. This priority is to be assigned and agreed to by the customer requesting the capability. Priorities should be assigned by a High, Medium, Low prioritization.	
		High	The capability will not be complete without this requirement, and is deemed unacceptable without it
		Medium	The capability would be enhanced with the requirement being completed, but would not make the solution unacceptable if it was not met
		Low	The requirement may provide some benefit but does not affect the bottom line capability being requested.
5.	Supporting Process	What business process from 1.2 Process Flow Diagram is this requirement attached to or supporting?	
6.	Owner / Contact	List out the individual(s) who provided the information to define the requirement, as well as the Portfolio Manager who is overseeing the functional area that the requirement satisfies.	

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2.1 – Capability Requirements

Describe the system functionality required to support the processes defined in Section 1.2. This section should describe and define the business rules and associated information required to produce most of the system outputs, including screens, reports, processing logic, interfaces, extract, transform, and load requirements (ETL/ELT), etc.

Use the requirements format described in Section 2.0. The Capability Requirements Description field should contain at minimum the following information:

Description (incl. references, business rules, data elements, authoritative data sources, validation, error handling)	<ul style="list-style-type: none">❖ References to other data or capabilities under the IGC enclave❖ Level of detail permitting the development of models with desired functionality❖ User interface, screen layout, reporting attributes, Multi-dimensional requirements, etc.❖ Inputs / outputs❖ ETL/ELT❖ Calculations❖ Error conditions and error handling❖ Business and Processing Rules and/or Limitations❖ Transmission Medium (Enterprise Service Bus, DB Link, FTP, etc.)
--	--

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2.2 – Services Requirements

Describe the services requirements to support the desired capabilities being requested.
Use the requirements format described in Section 2.0. The Service Requirements Description field should take into account all existing GCSS-AF Service Offerings.

Example Items to take into considerations:

How will metadata be captured?	Metadata Repository (SUPERGLUE)
How will access be granted to the solution?	DISA Form 2875
How will security be handled?	Tivoli Access Manager (TAM)
Where will the services be registered?	Services Registry (SYSTINET)
Will this capability need to feed the AF-COP?	No
Etc.	N/A

2.3 – Compliance Requirements

Describe the compliance requirements to support the desired capabilities being requested. Use the requirements format described in Section 2.0. The Compliance Requirements Description field should document any compliancy issues to be addressed.

Example Items to take into considerations:

- ❖ CFO Compliance
- ❖ Sarbanes Oxley
- ❖ Etc

2.4 –Special Data Requirements

Describe any additional special requirements to support the desired capabilities being requested. Use the requirements format described in Section 2.0. The Special Data Requirements Description field should document any special issues to be addressed.

Example Items to take into considerations:

- ❖ Purge Criteria
- ❖ Online Direct Access – (How much data should be directly accessible, 15 years?)
- ❖ Backup Requirements
- ❖ Special Data Availability Requirements

3.0 – Authoritative Data Sources and Entities

This section should identify all authoritative data sources required to satisfy the requirements that were identified in Section 2.0. The Subject Matter and Functional Experts should be identified and should assist in all data requirements.

The contractor shall document the requirements in terms of entities, attributes, relationships, and the corresponding definitions that would be involved in the requested capability and where the authoritative sources reside.

4.0 – Performance / Load Requirements

This section should identify all performance requirements required for the desired solution. Processing and load requirements should both be identified and documented here.

Example Items to take into considerations:

- ❖ Data Loaded into IGC in 8 hour increments
- ❖ Real-Time Data Loads
- ❖ 100,000 records returned to the user in under a minute
- ❖ Etc.

5.0 – Exit Criteria Requirements

This section should identify all exit criteria for a successful implementation stated in customer terms.

Example Items to take into considerations:

- ❖ The system will maintain and return upon request queried data over a 5 year period regarding transporation data in a dashboard format, with no later than an X hour lead time.
- ❖ Etc.

DEVELOPER'S GUIDE

Developer's Guide Template

Description: The Developer's Guide (DG) provides information to enable a programmer to understand component internal and external interfaces and dependencies associated with a software program. The DG is developed for a specific system configuration.

This template contains the format, content, and intended use information for the data deliverable resulting from the work task described in the statement of work.

The following paragraphs identify the DG content requirements.

1. Scope. This section shall be divided into the following paragraphs.

1.1. Identification. This paragraph shall contain the approved identification numbers, titles, and if applicable, abbreviations of the system, components, dependent components, operating system, to which this DG applies. This paragraph shall begin with the following sentence:

“This Software Programmer's Guide provides information to facilitate programming or modifying the software of the (insert title, if applicable insert abbreviation in parenthesis, insert system identification number) System”. It is applicable to the following components(s) (insert title(s), if applicable insert abbreviation(s) in parenthesis, insert Components identification number(s), for the target computer (insert title, computer identification number), if applicable insert abbreviation in parenthesis, insert host computer identification number).”

1.2. Purpose. This paragraph shall state the purpose of the system, and identify the computer operating system to which this DG applies.

1.3. Introduction. This paragraph shall summarize the purpose and contents of this document.

1.4. Reference Documents. This section shall list by document number and title all documents referenced in this manual. This section shall also identify the source for all documents not available through normal Government stocking activities.

1.5. General Information. This section shall be divided into the following paragraphs, as applicable, to describe the components of and the programming information for the computer systems.

1.5.1. Software Configuration. This paragraph shall briefly describe the components of the computer system.

1.5.2. Operational Structure. This paragraph shall describe the operating characteristics, capabilities, and limitations of the computer systems relevant to the programming function. If this information is provided in a commercially available document, then this paragraph shall identify the document by title and number and shall reference appropriate sections of the document. Otherwise, this paragraph shall describe (as applicable):

- a. Minimum configuration required
- b. Memory capacity and characteristics
- c. Administration instructions
- d. Modes of operation (e.g.. hatch, interactive, etc.)
- e. Error indicators

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- f. Input/output characteristics
- g. Special features

1.5.3. Build Process Compilations and Assemblies. This paragraph shall provide a description of development environment, such as use of Visual Studio C++ or Visual Basic for programming environment. In addition, it shall define a build process, configuration management tools to control the baseline development, methodology to monitor and control baseline versioning, style guides, and programming standards. This paragraph shall describe the equipment (e.g. tapes, disks, and peripheral equipment) necessary to perform compilations and assemblies of software on the system. This paragraph shall identify (as applicable) by name and version number, the editor, linker, link-editor, compiler, assembler, cross-compilers, cross-assemblers, operating system, and any other utilities used and shall reference the appropriate manuals describing their use. This paragraph shall also highlight any special flags or instructions necessary for loading, executing, or recording the results of compilations and assemblies. Finally, it shall provide descriptions of the **COTS** products used and the licensing requirements.

1.6. Programming Specific Information. This section shall be divided into the following paragraphs, as applicable.

1.6.1 Component Interfaces. The interfaces are defined in IDL files, and compiled into type libraries. This paragraph shall describe necessary items to effectively document the programming interface and include the detailed information required to understand programming of the computer interfaces.

- a. Interface description – how the component operates internally.
- b. Description of inputs/outputs of methods, including data representation (e.g., byte, word, integer, floating—point, packed decimal, and double precision).
- c. Ranges (such as 0-99)
- d. Accuracy (correctness)
- e. Priority
- f. Data structures (trees, link-list)
- g. Semantics of data and integrity rules
- h. Units of measure (such as meters, nanoseconds)
- i. Event
- j. States
- k. Pre/Post conditions
- l. Error conditions
- m. Algorithm description, if applicable
- n. Security and privacy considerations
- o. Constraints
- p. Limitations

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1.6.2. Component Features. This paragraph shall describe the programming features of the computer software from the programmer's point of view. This paragraph shall describe (as applicable):

- a. Logical Data Model defining the entities of the system and their relationships.
- b. Data dictionary
- c. Physical Data Model
- d. Performance built-in software
- e. Identify States/Modes
- f. All methods are public methods (e.g. non-reentrant, reentrant, macrocode routines, argument lists, and parameter passing conventions (call by name and call by value))
- g. Patch Features
- h. Memory Protection Features. (e.g. read-only memory)
- i. Additional Features. A separate paragraph shall be prepared for each additional feature.

1.6.3. Program Instructions. This paragraph shall contain a detailed description of the architecture applicable to external interfaces and dependencies. If this information is provided in other available documents (e.g. commercially available documents. MIL-STD(s)), then this paragraph shall identify the document by title and number and shall reference appropriate sections of the document. Otherwise, for each instruction the following (as applicable) shall be described:

- a. Top level architecture
- b. Use of external interfaces, referencing specific Interface Control Documents (ICDs)
- c. Timing budget allocation to components
- d. Execution time of component
- e. Conventions (Naming, XML, Mnemonic)
- f. Other characteristics.

1.6.4. Programming Examples. This paragraph shall present examples of programming techniques that adequately demonstrate the accepted methods of using the instructions in the instruction set architecture of the target computer system. This paragraph shall include examples of the proper use of all categories of instructions. The examples shall demonstrate the use of programming techniques on the specific target computer system (e.g. instructions, statements).

1.6.5. Additional or Special Technologies. This paragraph shall describe any additional or special techniques of the prescribed language not included elsewhere.

1.6.6. Error Detection and Diagnostic Features. This paragraph shall describe the error detection and diagnostic features of the assembly language, machine language, or higher order language. This description shall include condition codes, overflow and addressing exception interrupts, and input and output error status indicators.

2. Notes. This section shall contain any general information that aids in understanding this document (e.g. background information, glossary). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document.

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3. Appendices. Appendices may contain any supplemental information which is published separately for convenience in document maintenance (e.g. charts, classified data). Appendixes may be bound as separate documents for ease in handling. Appendixes shall be numbered sequentially in Roman numeral (I, II, etc). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided.

FUNCTIONAL SPECIFICATION

Functional Specification Template

INTEGRATED DATA ENVIRONMENT (IDE)/GLOBAL TRANSPORTATION NETWORK (GTN) CONVERGENCE (IGC) FUNCTIONAL SPECIFICATION



Date

**Integrated Data Environment/Global Transportation Network Convergence (IGC)
Performance Work Statement V1.7**

VERSION X.X

**Integrated Data Environment/Global Transportation Network Convergence (IGC)
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1.0 INSTRUCTIONS

1.1 Introduction

The Functional Specification shall be completed during the Functional Phase. The Functional Specification shall detail to a sufficient degree how each of the system's components perform to meet the business and technical requirements of the solution release.

The Functional Specification should document the requested capability's concept, functions/features, and how each of the components will be developed/integrated/enhanced to meet the customer's needs. The contractor shall identify and describe, at the appropriate system, subsystem, unit, or module level, the various functions. This Functional Specification shall be referred to and utilized as an input to the Requirements Traceability Matrix.

This document should be considered a living document throughout the course of an activity and should be placed under configuration management. Upon completion of the Functional Phase the contractor will conduct a Functional Review where the Functional Specification and Requirements Traceability Matrix will be signed off, signifying government acceptance of the documents.

1.2 Objective

The primary goal of building the Functional Specification is to document how the specific business requirements and capabilities being requested by the customer will be satisfied. The contractor shall take the Requirements Specification from the Requirements Phase and build the Functional Specification, which details how each of the detailed business requirements will be implemented. At this phase the Logical Data Model (LDM) shall be updated and fully attributed.

1.3 Principles

Upon completion of the Functional Phase, the contractor shall be able to determine how the business requirements will be met, with what tools, from what sources, what the logical data model looks like, and what the reports (if any) will look like, as well as the logical source to target mapping. The Requirements Traceability Matrix should be updated with the mappings from the Functional Specification prior to the Functional Review.

If during the functional phase short falls in the tools/services being provided by the IDE/GTN Convergence (IGC) are identified, it shall be communicated as soon as possible to the Government.

1.4 Configuration Management

The Functional Specification upon approval during the formal Functional Review shall be placed under configuration control by the Government.

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2.0 Functional Specification Sign-off Sheet

Approved by:

Government Sponsor/Customer	Date
Comments:	
IGC Integration Lead	Date
Comments:	
IGC Architecture Lead	Date
Comments:	
IGC PMO Lead	Date
Comments:	
Systems Integrator Lead	Date
Comments:	
Systems Provider Lead	Date
Comments:	

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3.0 Functional Specification Document

3.1 Capability Summary

Summarize at a high-level the requested capabilities as they relate to the requirements identified in the Requirements Specification. Include the main design characteristics that will be utilized for the solution.

3.2 Reference Materials

Document all applicable documents reference in the Functional Specification. For example:

- ❖ Requirements Specification
- ❖ DoD 8320.2
- ❖ Etc.

3.3 High-Level Architecture Diagram

The high-level architecture diagram should show the components that will be required to deliver the requested capability and the relationships between them. This architecture will be used to determine solution fielding options. If a solution is able to be fielded in spirals while delivering incremental capability, this should be pictorially represented.

3.4 Capability Release Strategy

Describe the release strategy recommended for the overall solution.

Identify the release components being documented in this Functional Specification.

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3.5 Functional Components

The Functional Component Section should detail each of the desired capabilities individual components. The components should be detailed to a level such that one could derive how each component of a solution is going to operate, and what function the component will perform.

All components should assure reutilization of existing GCSS-J services, as well as integration to existing and evolving IGC data, Extract, Transform and Load (ETL) Processes, and Business Intelligence (BI) solutions.

Identify and describe, at the appropriate system, sub-system, unit or module level, the various functions. The contractor shall express them in terms of inputs, outputs, processes, cause and effect relationships, initiation, execution and termination of function, and indicate whether the function is standard or optional.

3.5.1 Component Description

Map the component to the Requirements ID documented in the Requirements Specification. Provide a high level description of the component, its purpose, and how it will be satisfied (developed/integrated/enhanced).

Assign a Component ID that will be referenced in the Requirements Traceability Matrix. The Component ID should be in the format: IIII.ABCD.NNNN.COMP where IIII.ABCD.NNNN references the Requirements ID specified in the Requirements Specification and COMP is the unique component identifier. Example: (ICBIS.0001.0001, III.AFEM.0001.0001)

3.5.2 Component Architecture

Include component architectures that detail where the component lies in the overall solution. Use this architecture to show services being utilized. In the architecture reference the Component IDs created in Section 3.5.1

Drive each level of architecture lower by components within that specific requirement.

3.5.3 Business Rules, Filters, and Processes

Describe the appropriate business rules, filters, and processes per each component required to satisfy the requested capability. This section should provide details to a specific component outlined in Section 3.5.2.

3.5.4 End User Capability

Provide the details around the desired end-user capability. This can be detailed as individual components. During the functional phase the reports, dashboards, analytical applications should be mapped in terms of end-user requirements. For instance the report layout, columns, cyclical rate, etcetera should be detailed at this stage.

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The following table provides some details to consider:

Report Formats	Field Descriptions	Cross Functional Requirements
Report Descriptions	DDMS Elements	Capability Addressed
Refresh Rate	Run-Time Requirements	Related Data Sets

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3.6 Data Architecture

3.6.1 Logical Data Model (LDM)

This section may reference an outside tool for modeling (ERWIN).

The logical data model shall be an integrated, fully attributed logical data model and shall utilize all existing touch points within the existing and evolving integrated IGC LDM.

The LDM should be completed and should be representative of the solution. This LDM will be used as the basis for the physical data model as part of the design phase.

3.6.2 Logical Source to Target Mappings

The logical source to target mappings should be created and should work in conjunction with the LDM built in section 6.1. The source to target mappings should be attached as a table or an excel spreadsheet, being fully attributed with all appropriate load routines, business rules, and staging tables identified.

This section should also document how the metadata will be captured during ETL/ELT.

The logical source to target mapping should assure reutilization of all existing services and routines.

3.6.3 Data Transmission and Medium

Define what transmission medium will be utilized (Enterprise Service Bus “ESB”, Data Base Links “DB Link”, File Transmission Protocol “SFTP”, Etc.) per data set.

Document all rules, definitions, dependencies, queues, adapters, etc that are required during data transmission.

What tools will be required, map the defined sources in 6.2 to data transmission. A diagram may be useful here to show components to sources, across mediums.

3.6.4 Data Transaction

Describe by source and component the number of expected transactions. (Inputs/Outputs per data warehouse request by loading utility, by solution set, etc.)

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3.7 Infrastructure

3.7.1 Hardware Environment

Describe the known required hardware to support the solution. This can be documented by components or sub-components.

This should include

- ❖ Teradata
- ❖ Business Intelligence
- ❖ Extract, Transform, and Load
- ❖ Staging
- ❖ Data Transmission
- ❖ Other HW Related to the Solution

3.7.2 Software Environment

Describe the known required software to support the solution. This can be documented by components or sub-components.

This should include

- ❖ Teradata
- ❖ Business Intelligence
- ❖ Extract, Transform, and Load
- ❖ Staging
- ❖ Data Transmission
- ❖ Other HW Related to the Solution

Is a new version of software required to support a desired capability?

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3.8 Solution Access

3.8.1 Roles, Responsibilities, and Privileges

Define required roles, responsibilities, and privileges for the solution by component. Place these into a table if different components require different security access.

Example: Catalog has currently defined 2 tables that must be secured differently than all other catalog tables.

3.8.2 System Access

Define process upon which system access will be granted. Identify any special system or capability access requirements.

3.8.3 Metrics

Define solution metrics that will provide and define success criteria once the solution is implemented.

This should include:

- ❖ Data Loads (Receipt, Load, Access)
- ❖ Capability Availability
- ❖ Performance
- ❖ Others

INTERFACE DESIGN DESCRIPTION DOCUMENT

Interface Design Description Template

Description: The Interface Design Description (IDD) describes the interface characteristics of one or more systems, subsystems, Hardware Configuration Items (HWCI)s, Computer Software Configuration Items (CSCI)s, manual operations, or other system components. An IDD may describe any number of interfaces.

The IDD and its companion Software Requirements Specification (SRS) serve to communicate and control interface design decisions.

This template contains the content instructions for the data product generated by specific and discrete task requirements as delineated in the Contract. This template is used when the developer is tasked to define and record the interface design of one or more systems, subsystems, HWCI)s, CSCI)s, manual operations, or other system components.

The SRS specifies interface requirements; the IDD describes interface characteristics selected to meet those requirements. The IDD may reference the SRS to avoid repeating information. The IDD can be used to supplement the SSDD, SDD, or DBDD.

The following paragraphs identify the IDD content requirements.

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system(s), the interfacing entities, and interfaces to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system(s) and software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the program sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Interface design. This section shall be divided into the following paragraphs to describe the interface characteristics of one or more systems, subsystems, configuration items, manual operations, or other system components. If part or all of the design depends upon system states or modes, this dependency shall be indicated. If design information falls into more than one paragraph, it may be presented once and referenced from the other paragraphs. If part or all of this information is documented elsewhere, it may be referenced. Design conventions needed to understand the design shall be presented or referenced.

3.1 Interface identification and diagrams. For each interface identified in 1.1, this paragraph shall state the project-unique identifier assigned to the interface and shall identify the interfacing entities (systems, configuration items, users, etc.) by name, number, version, and documentation references, as

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applicable. The identification shall state which entities have fixed interface characteristics (and therefore impose interface requirements on interfacing entities) and which are being developed or modified (thus having interface requirements imposed on them). One or more interface diagrams shall be provided, as appropriate, to depict the interfaces.

3.1.1. Project-unique identifier of interface. This paragraph shall identify an interface by project-unique identifier, shall briefly identify the interfacing entities, and shall be divided into subparagraphs as needed to describe the interface characteristics of one or both of the interfacing entities. If a given interfacing entity is not covered by this IDD (for example, an external system) but its interface characteristics need to be mentioned to describe interfacing entities that are, these characteristics shall be stated as assumptions or as “When [the entity not covered] does this, [the entity that is covered] will” This paragraph may reference other documents (such as data dictionaries, standards for protocols, and standards for user interfaces) in place of stating the information here. The design description shall include the following, as applicable, presented in any order suited to the information to be provided, and shall note any differences in these characteristics from the point of view of the interfacing entities (such as different expectations about the size, frequency, or other characteristics of data elements):

- a. Priority assigned to the interface by the interfacing entity(ies)
- b. Type of interface (such as real-time data transfer, storage-and-retrieval of data, etc.) to be implemented
- c. Characteristics of individual data elements that the interfacing entity(ies) will provide, store, send, access, receive, etc., such as:
 - 1) Names/identifiers
 - a) Project-unique identifier
 - b) Non-technical (natural-language) name
 - c) DOD standard data element name
 - d) Technical name (e.g., variable or field name in code or database)
 - e) Abbreviation or synonymous names
 - 2) Data type (alphanumeric, integer, etc.)
 - 3) Size and format (such as length and punctuation of a character string)
 - 4) Units of measurement (such as meters, dollars, nanoseconds)
 - 5) Range or enumeration of possible values (such as 0-99)
 - 6) Accuracy (how correct) and precision (number of significant digits)
 - 7) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the data element may be updated and whether business rules apply
 - 8) Security and privacy constraints
 - 9) Sources (setting/sending entities) and recipients (using/receiving entities)
- d. Characteristics of data element assemblies (records, messages, files, arrays, displays, reports, etc.) that the interfacing entity(ies) will provide, store, send, access, receive, etc., such as:
 - 1) Names/identifiers

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- a) Project-unique identifier
 - b) Non-technical (natural language) name
 - c) Technical name (e.g., record or data structure name in code or database)
 - d) Abbreviations or synonymous names
 - 2) Data elements in the assembly and their structure (number, order, grouping)
 - 3) Medium (such as disk) and structure of data elements/assemblies on the medium
 - 4) Visual and auditory characteristics of displays and other outputs (such as colors, layouts, fonts, icons and other display elements, beeps, lights)
 - 5) Relationships among assemblies, such as sorting/access characteristics
 - 6) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the assembly may be updated and whether business rules apply
 - 7) Security and privacy constraints
 - 8) Sources (setting/sending entities) and recipients (using/receiving entities)
 - e. Characteristics of communication methods that the interfacing entity(ies) will use for the interface, such as:
 - 1) Project-unique identifier(s)
 - 2) Communication links/bands/frequencies/media and their characteristics
 - 3) Message formatting
 - 4) Flow control (such as sequence numbering and buffer allocation)
 - 5) Data transfer rate, whether periodic/aperiodic, and interval between transfers
 - 6) Routing, addressing, and naming conventions
 - 7) Transmission services, including priority and grade
 - 8) Security/privacy considerations, such as encryption, user authentication, compartmentalization, and auditing
 - f. Characteristics of protocols the interfacing entity(ies) will use for the interface, such as:
 - 1) Project-unique identifier(s)
 - 2) Priority/layer of the protocol
 - 3) Packeting, including fragmentation and reassembly, routing, and addressing
 - 4) Legality checks, error control, and recovery procedures
 - 5) Synchronization, including connection establishment, maintenance, termination
 - 6) Status, identification, and any other reporting features
 - g. Other characteristics, such as physical compatibility of the interfacing entity(ies) (dimensions, tolerances, loads, voltages, plug compatibility, etc.)
4. Requirements traceability. This paragraph shall contain:

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a. Traceability from each interfacing entity covered by this IDD to the system or CSCI requirements addressed by the entity's interface design.

b. Traceability from each system or CSCI requirement that affects an interface covered in this IDD to the interfacing entities that address it.

5. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendices. Appendices may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendices may be bound as separate documents for ease in handling. Appendices shall be lettered alphabetically (A, B, etc.).

MEETING AGENDA/MEETING MINUTES

Comment: Included proposed PWS V0.13 edits – see paragraph 2.3.2.

Meeting Agenda Template

Description: The meeting agenda provides information concerning purpose, location and schedule of meetings required under the terms of the Contract.

This template contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the Contract.

Requirements:

1. General Instructions

1.1. Format. The meeting agenda may be presented in the Contractor's format.

1.2. Content.

a. Date/time, duration and location of the meeting.

b. Title – type of meeting (study, contract, audit, design review, etc.).

c. Title of Program/Project

d. Contract Number and/or procurement request number.

e. Teleconferencing information (i.e., telephone dial-in number or video teleconferencing arrangements, POC, etc.)

1.3. Introduction.

a. Statement relating to the purpose/objective of the meeting.

1.4. Administrative.

a. Authority under whose direction the meeting is convened.

b. Name and title of the chair/co-chair.

c. Name, title and contact information of the persons to attend.

1) Persons required

2) Persons optional

1.5. Description of meeting content.

a. Each item to be discussed/reviewed during the meeting.

b. Reference to and brief description of the results of previous meetings, when relevant; brief description of progress on actions or problems identified at previous meetings, when applicable.

c. Location, schedule, and purpose or subject area to be covered by each subcommittee, when applicable.

d. Complete list of all documentation to be available for review.

1.6. Logistics. Information on billeting, messing, transportation, and administrative services available to meeting attendees.

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Meeting Minutes Template

Description: The report is a record of the proceedings of a specified meeting. The minutes will be used by appropriate Government and Contractor personnel as a record of the deliberations and actions resulting from meetings related to performance of work under this Contract. These meeting minutes are to be accompanied by the corresponding Meeting Agenda.

Requirements:

1. General Instructions

1.1. Format. This deliverable may be presented in the Contractor's format.

1.2. Content.

1.2.1. Title Page. The report shall contain a title page which specifies the following:

- a. Date/time, duration and location of the meeting.
- b. Title – type of meeting (study, contract, audit, design review, etc.).
- c. Title of Program/Project
- d. Contract Number and/or procurement request number.
- e. Signature(s) – Meeting facilitator or designated representative.

1.2.2. Introduction.

- a. Statement relating to the purpose/objective of the meeting.
- b. The original agenda and any revisions thereto. (this may be accomplished by reference to attachment/enclosure).

1.2.3. Administrative.

- a. Date/time and location of the meeting.
- b. Authority under whose direction the meeting was convened.
- c. Name and title of the chair/co-chair.
- d. Name, title and contact information of the persons in attendance.

1.2.4. Description of meeting content.

1.2.4.1 Item. Each item discussed/reviewed during the meeting.

1.2.4.2. Discussion. A summary of pertinent information associated with the item.

1.2.4.3. Recommendations. A list of both the PM's and Contractor's recommendations.

1.2.4.4. Action. A brief statement of agreements reached, actions required by the PM or Contractor, identity of the personnel or activity assigned responsibility for taking and/or coordinating required action, contractual action and key dates.

MONTHLY STATUS REPORT

Contractor's Progress, Status and Management Report Template

Description: The Contractor's Progress, Status and Management Report indicates the progress of work and the status of the program and of the assigned tasks, reports costs, and informs of existing or potential problem areas.

This template contains the preparation instructions for the data product generated by the specific and discrete task requirement for this data included in the Contract.

This template may be applied in any contract and during any program phase.

This section shall contain the following specified content.

- a. Progress. Description of the progress made against milestones during the reporting period.
- b. Results. Positive or negative, obtained related to previously-identified problem areas, with conclusions and recommendations.
- c. Changes. Any significant changes to the Contractor's organization or method of operation, to the program management network, or to the milestone chart.
- d. Problem areas.
 - (1) Affecting technical or scheduling elements, with background and any recommendations for solutions beyond the scope of the Contract.
 - (2) Affecting cost elements, with background and any recommendations for solutions beyond the scope of the Contract.
- e. Cost.
 - (1) Cost curves showing actual and projected conditions throughout the Contract.
 - (2) Cost incurred for the reporting period and total contractual expenditures as of reporting date.
- f. Person-hours. Expended for the reporting period and cumulatively for the Contract.
- g. Trips and significant results. Include Trip Report(s) as an appendix.
- h. Telephone calls. All significant telephone calls and any commitments made by telephone.
- i. Engineering Change Proposal (ECP) status. Summary, including identification of proposed ECPs, approved ECPs, and implemented ECPs.
- j. Contract schedule status.
- k. Plans. Activities scheduled for the following reporting period.
- l. Contact information. Name, telephone number and email address of preparer of the report.
- m. Appendices. Any necessary tables, references, photographs, illustrations, and charts.

INTEGRATED PROGRAM MANAGEMENT PLAN

Integrated Program Management Plan Template

Description: The Integrated Program Management Plan (IPMP) provides an overview of the different program processes and how they fit together to form a totally integrated management system for the program. As an analogy it should be like the key map at the front of a street directory. It should provide an overview and show how all of the detailed processes (maps) fit together.

The Contractor uses the IPMP, including or supplemented by subordinate plans, to provide direction and guidance to the Contractor's management team responsible for conduct of the work. The IPMP is the primary plan for the Contract. All other plans related to the Contract fit beneath the umbrella of the IPMP. The IPMP is used to gain visibility into the Contractor's planning, understand and evaluate the Contractor's approach to managing the program, and provide input into the organization's planning. The IPMP shall comply with the general format, content and preparation instructions contained herein.

The following paragraphs identify the IDD content requirements.

1. Specific Content

1.1. General

1.1.1. The IPMP shall be a stand-alone document that provides sufficient information to allow the reader to understand how the program will be managed without referring to other documents. It is not acceptable to simply reference a document, procedure or standard without providing an overview of the material referenced.

1.1.2. The IPMP shall be the master planning document, integrating, summarizing and referencing other project plans and schedules required in this template and elsewhere in the Contract.

1.1.3. The following paragraphs outline the framework of the IPMP. This framework should not limit the Contractor in developing the IPMP, which must reflect the way in which the Contractor wishes to manage the program during the Contract.

1.2. System Overview

1.2.1 The IPMP shall give a brief overview of the system being developed and its purpose.

1.3. Program Scope

1.3.1. The IPMP shall clearly identify:

a. the scope of work undertaken for this program, including the scope undertaken by the Contractor and Approved Subcontractors, and;

b. areas that are not within scope, if there is a possibility of the reader misinterpreting the scope (interfaces with other programs or systems are typical areas that may be misinterpreted).

1.4. Program Organization

14.1. The IPMP shall describe the organizational structure responsible for managing and performing the scope of work under the Contract. Content shall include:

- a. the Contractor's company organization structure;
- b. the Contractor's program management organization;

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- c. the Contractor's contractual relationship with Approved Subcontractors for the purpose of the program;
- d. each Approved Subcontractor's organizational and project structure to the extent applicable to the program, and;
- e. the identification of each key person (e.g. Program Manager, Systems Engineering Manager and Integrated Logistic Support Manager), including relevant background skills and experience.

1.5. Structure of Contractor Plans

1.5.1. The IPMP shall contain a structured, indented list of the plans to be used by the Contractor in the execution of the Contract, showing the hierarchical relationship of the plans.

1.6. Contract Work Breakdown Structure (CWBS)

1.6.1. If a CWBS is a requirement of the Contract, the IPMP shall contain the CWBS as an indented list to level 4.

1.7. Integrated Master Schedule (IMS)

1.7.1. The IPMP shall contain an overview of the IMS, including the critical path.

1.8. Program Planning and Control

1.8.1. The IPMP shall contain an overview of the processes and tools used by the Contractor to ensure the integration of technical, cost and schedule planning and control for the management of the program.

1.9. Engineering Program

1.9.1. The IPMP shall contain an overview of the engineering program, referring to any detailed engineering plan(s) as appropriate.

1.10. Integrated Logistics Support (ILS) Program

1.10.1. The IPMP shall contain an overview of the ILS program, referring to any detailed ILS plan(s) as appropriate.

1.11. Configuration Management

1.11.1. The IPMP shall contain an overview of the Configuration Management arrangements for the Contract, referring to the Configuration Management Plan (CMP) or the Systems Engineering Plan (SEP), as appropriate.

1.12. Program Risk Management

1.12.1. The IPMP shall contain an overview of the Risk Management processes, tools and Risk Register to be used by the Contractor.

1.13. Program Issue Management

Note: In this context, 'issues' are items whose progress needs to be monitored, but which do not appear in the Risk Register because they are technically not risk, as they do not represent any cost or schedule threat to the program at this point in time.

1.13.1. The IPMP shall describe the Contractor's processes and tools used for managing issues for this program. Typical issues include:

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- a. action items from meetings;
- b. corrective actions;
- c. issues arising from deviation of progress against plan, and;
- d. issues arising from correspondence.

1.14. Subcontract Management

1.14.1. The IPMP shall provide an overview describing how the Contractor intends to manage Subcontractors, including:

- a. the communications, meeting and review plan for each Approved Subcontractor;
- b. the method for ensuring that each Approved Subcontractor has an integrated technical, cost and schedule control mechanism in place;
- c. the method for ensuring that each Approved Subcontractor is collecting and analyzing relevant program metrics to enable progress to be tracked against plan, and;
- d. the method for ensuring that each Approved Subcontractor is managing its own suppliers.

1.15. Security Management

1.15.1. The IPMP shall include an overview of the processes implemented by the Contractor to satisfy the Contract requirements and shall refer to any separate Security Management Plan.

1.16. Program Communications Management

1.14.1. The IPMP shall define the processes and information flows associated with program communications between the Contractor and the Government.

1.17. Government Resources

1.17.1. The IPMP shall detail arrangements for the collocation of any Resident Program Personnel (RPP) at the Contractor's premises, if required by the Contract.

1.18. Transition

1.18.1. The IPMP shall contain an overview of the Contractor's Transition activities under the Contract, referring to any Contractor Transition Plan (CTXP) as appropriate.

1.19. Government Furnished Material

1.19.1. The IPMP shall describe the Contractor's arrangements for the receipt, custody, storage, care, maintenance and use of any Government Furnished Equipment/ Government Furnished Information (GFE/GFI) provided to the Contractor under the Contract.

INTEGRATED MASTER SCHEDULE

Level of detail for a Microsoft Project file:

- a. Summary Level. The Summary Level of the Integrated Master Schedule (IMS) shall provide a graphical display of Contract activities, key events, and milestones at Level 3 of the WBS.
- b. Intermediate Level. The Intermediate Level of the IMS shall provide a graphical display of Contract activities, key events, and milestones at the control account level of the WBS. An IMS generated at the Intermediate Level shall be able to be rolled up to, and shall provide visibility of, the Summary Level.
- c. Detailed Level. The Detailed Level of the IMS shall provide a graphical display of Contract activities, key events, and milestones at the work-package level of the WBS. An IMS generated at the Detailed Level shall be able to be rolled up to, and shall provide visibility of, both the Intermediate Level and the Summary Level.)

Format. Microsoft Project.

QUALITY ASSURANCE PLAN

Quality Assurance Plan Template

Description: The Quality Assurance Plan (QAP) describes the program to be utilized by the Operations and Maintenance (O&M) Contractor to fulfill the statement of work quality program requirements. This Document is generated by the Contract which contains a specific and discrete work task to develop this data product; approved Contractor format is acceptable.

The following paragraphs identify the QAP content requirements.

1. Scope. This section shall be divided into the following paragraphs.

1.1. Content. Following the guidance contained in the statement of work, the Quality Assurance Plan shall include the following:

1.1.1. Organizational Structure. The QAP shall include charts and narrative statements describing each element of the Contractor's organization (Quality Assurance, Maintenance Management, Contracting, etc.) which implements the Quality Assurance, and detailed statements of duties, functions and responsibilities related to each quality program task. The QAP shall explicitly show the relationship of the individual directly managing the Quality Assurance with each element performing quality program tasks, including his authority to monitor and control such tasks and his authority to implement remedial and preventive action.

1.1.2. Quality Assurance Tasks Descriptions. The QAP shall document the Contractor's understanding of the quality requirements of the Contract. This shall include a listing and descriptions of the general and specific quality tasks associated with each phase of the Contractor's operation. The QAP shall show, by charts or other graphic devices as necessary, the manner in which the Contractor's Quality Assurance and Quality Assurance Department shall ensure that quality assurance and control measures are developed, implemented, monitored and enforced.

1.1.3. Quality Assurance Task Execution. The QAP shall include narrative descriptions to show the Contractor's management and execution of each task, detailed in terms of who or when, by which organization, and by which methods each task will be accomplished. Contractor policies and procedures applicable to the task shall be detailed.

1.1.4. Audit Plan.

1.1.4.1. In – Process Audits. The QAP shall document the Contractor's procedures for ensuring that audits are conducted to ensure acceptable quality of all the requirements of the Contract. Method and frequency of audits shall be described.

1.1.4.2. Audit Report. The QAP shall describe the reports resulting from audits and their disposition (i.e., routing and filing). As a minimum, reports shall include; functional area inspected, date of inspection, name of inspector, discrepancies noted, corrective action, follow – up actions, and "get – well" dates for open items.

1.1.4.3. Analysis. The QAP shall include procedures for analyzing the audit reports to detect defect – producing conditions and their elimination to prevent recurrences.

1.1.4.4. Special Requirements. The QAP shall address any special requirements set forth in the Quality Assurance section of the Statement of Work and, throughout the Plan, emphasis shall be given to these special requirements.

TECHNICAL REPORT

Technical Report - Study/Services Template

Description: A technical report provides fully documented results of studies or analyses performed.

This template contains the format and content instructions for the data product generated by the specific and discrete task requirement as delineated in the Contract.

It is not intended that all the requirements contained herein should be applied to every program or program phase. Portions of this template are subject to deletion and/or tailoring depending upon the program phase in which it is applied in the Contract.

This section shall contain the following specified content.

1. Content.

1.1. Summary. A brief statement of results obtained from the analytic effort.

1.2. Conclusions. Condensed technical substantiation for the results reported.

1.3. Detailed results. A complete and detailed description of the analytic results which led to the conclusions stated above.

TEST PLANS AND PROCEDURES

Acceptance Test Plan and Procedures Template

Description: The Acceptance Test Plan and Procedures (ATP&P) describes the organizations, schedule, responsibilities, procedures and other details that are necessary for specific segments or phases of the overall test program, as required by the Contract. The ATP&P is used to confirm the Contract requirements have been met.

The Contractor uses the ATP&P to:

- a. define, manage and monitor the plans and procedures for conducting specific segments or phases of the overall test program, and;
- b. ensure that those parties (including Subcontractors) who are undertaking Acceptance testing activities understand their respective responsibilities, the processes to be used, and the time-frames involved.

The Government uses the ATP&P to:

- a. understand and evaluate the Contractor's approach to meeting the Acceptance testing requirements of the Contract;
- b. assist with monitoring the Acceptance testing activities, and;
- c. provide input to the PMO's own planning for Acceptance testing.

The ATP&P inter-relates with the associated Acceptance Test Reports (ATRs).

Requirements:

1. General instructions.

1. For each item being addressed by the ATP&P, the ATP&P shall separately identify each requirement, and in respect of each requirement:

- a. provide a summary description of the test, including the organization(s) involved in the test and the responsibilities of key individuals;
- b. describe the test article, including test configuration identification;
- c. identify any limitations, assumptions and constraints associated with the testing, including any measurements that need to be taken at the time of the test to record uncontrollable conditions;
- d. identify any location or environmental considerations for the conduct of the test activities;
- e. identify any specialist test-authorization processes;
- f. identify the precursor test activities, if any, and the immediate successor test activities covered by a separate ATP&P, if applicable;
- g. identify the subordinate test procedures within the scope of the ATP&P, including the sequencing of the test procedures;
- h. identify other activities (e.g. inspection, analysis and demonstration) that will be conducted during the period covered by the ATP&P, including the scheduling of those activities during the test period;

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- i. provide a summary from the subordinate test procedures of the test equipment, documentation and personnel required for the conduct of the test;
 - j. describe the procedures to be adopted when a test result indicates the test has failed;
 - k. if applicable, describe the data-analysis processes, including the format for the presentation of the data in the ATR, and;
 - l. list the ATRs that will be generated by the ATP&P.
2. The following paragraphs identify the IDD content requirements.
1. Scope. This section shall be divided into the following paragraphs.
 - 1.1. Test Procedures. The ATP&P shall define test procedures that, to the maximum practicable extent, are modular to permit a failed test activity to be repeated, where possible, without repeating other parts of the test.
 - 1.1.1. The ATP&P shall define test procedures that include a range of scenarios to enable stress testing of the test article.
 - 1.1.2. For each test procedure identified, the ATP&P shall include, using separate annexes for each procedure:
 - a. a description of the scope of the test, including a test method, which shall provide a general description of the test activity;
 - b. a description of the test article, including test configuration identification;
 - c. the system configuration and initial conditions for test, including any preparatory requirements or other pre-test activities;
 - d. a description of any data inputs or data files required for the conduct of the test;
 - e. the test equipment, documentation, venue and personnel required for the conduct of the test;
 - f. all precautions necessary for the performance of the test procedure, and;
 - g. step-by-step procedures for the performance of the test, in sufficient detail to identify every action necessary for the conduct of the test, including:
 - (1) pre-test actions;
 - (2) any notes, cautions or warnings that are necessary at each stage of the test procedure;
 - (3) required operator test input;
 - (4) expected outcomes or results;
 - (5) space for recording actual results;
 - (6) space for comments;
 - (7) a block for sign-off signatures for all parties present at the test;
 - (8) a space for recording the configuration of the item(s) under test, including all major hardware and software configuration items;
 - (9) a space for recording all test equipment utilized and the calibration date of the equipment;

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(10) if applicable, a space for recording details of test-recording media that will support test analysis, and;

(11) a space for recording any post-test actions.

1.1.3. In conjunction with each test step, the test procedure shall define what measurements, readings, or observations are required for a correct response. As part of the test assessment data, PASS/FAIL criteria or the expected qualitative or quantitative result shall also be defined. Where a quantitative result is declared, this shall include the allowable tolerance for measurement errors (e.g. confidence limits). Where a qualitative result is declared, this shall include a description of the expected results of the test.

Software Test Plan Template

Description: The Software Test Plan (STP) describes plans for qualification testing of Computer Software Configuration Items (CSCIs) and software systems. It describes the software test environment to be used for the testing, identifies the tests to be performed, and provides schedules for test activities.

The following paragraphs identify the IDD content requirements.

1.1. Identification. This paragraph shall contain a full identification of the system(s), the interfacing entities, and interfaces to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2. System overview. This paragraph shall briefly state the purpose of the system(s) and software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the program sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3. Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

1.4. Relationship to other plans. This paragraph shall describe the relationship, if any, of the STP to related program management plans.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Software test environment. This section shall be divided into the following paragraphs to describe the software test environment at each intended test site. Reference may be made to the Software Development Plan (SDP) for resources that are described there.

3.1. Name of test site(s). This paragraph shall identify one or more test sites to be used for the testing, and shall be divided into the following subparagraphs to describe the software test environment at the site(s). If all tests will be conducted at a single site, this paragraph and its subparagraphs shall be presented only once. If multiple test sites use the same or similar software test environments, they may be discussed together. Duplicative information among test site descriptions may be reduced by referencing earlier descriptions.

3.1.1. Software items. This paragraph shall identify by name, number, and version, as applicable, the software items (e.g., operating systems, compilers, communications software, related applications

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software, databases, input files, code auditors, dynamic path analyzers, test drivers, preprocessors, test data generators, test control software, other special test software, post-processors) necessary to perform the planned testing activities at the test site(s). This paragraph shall describe the purpose of each item, describe its media (tape, disk, etc.), identify those that are expected to be supplied by the site, and identify any classified processing or other security or privacy issues associated with the software items.

3.1.2. Hardware and firmware items. This paragraph shall identify by name, number, and version, as applicable, the computer hardware, interfacing equipment, communications equipment, test data reduction equipment, apparatus such as extra peripherals (tape drives, printers, plotters), test message generators, test timing devices, test event records, etc., and firmware items that will be used in the software test environment at the test site(s). This paragraph shall describe the purpose of each item, state the period of usage and the number of each item needed, identify those that are expected to be supplied by the site, and identify any classified processing or other security or privacy issues associated with the items.

3.1.3. Other materials. This paragraph shall identify and describe any other materials needed for the testing at the test site(s). These materials may include manuals, software listings, media containing the software to be tested, media containing data to be used in the tests, sample listings of outputs, and other forms or instructions. This paragraph shall identify those items that are to be delivered to the site and those that are expected to be supplied by the site. The description shall include the type, layout, and quantity of the materials, as applicable. This paragraph shall identify any classified processing or other security or privacy issues associated with the items.

3.1.4. Proprietary nature, acquirer's rights, and licensing. This paragraph shall identify the proprietary nature, acquirer's rights, and licensing issues associated with each element of the software test environment.

3.1.5. Installation, testing, and control. This paragraph shall identify the developer's plans for performing each of the following, possibly in conjunction with personnel at the test site(s):

- a. Acquiring or developing each element of the software test environment
- b. Installing and testing each item of the software test environment prior to its use
- c. Controlling and maintaining each item of the software test environment

3.1.6. Participating organizations. This paragraph shall identify the organizations that will participate in the testing at the test sites(s) and the roles and responsibilities of each.

3.1.7. Personnel. This paragraph shall identify the number, type, and skill level of personnel needed during the test period at the test site(s), the dates and times they will be needed, and any special needs, such as multi-shift operation and retention of key skills to ensure continuity and consistency in extensive test programs.

3.1.8. Orientation plan. This paragraph shall describe any orientation and training to be given before and during the testing. This information shall be related to the personnel needs given in 3.1.7. This training may include user instruction, operator instruction, maintenance and control group instruction, and orientation briefings to staff personnel. If extensive training is anticipated, a separate plan may be developed and referenced here.

3.1.9. Tests to be performed. This paragraph shall identify, by referencing section 4, the tests to be performed at the test site(s).

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4. Test identification. This section shall be divided into the following paragraphs to identify and describe each test to which this STP applies.

4.1. General information. This paragraph shall be divided into subparagraphs to present general information applicable to the overall testing to be performed.

4.1.1. Test levels. This paragraph shall describe the levels at which testing will be performed, for example, CSCI level or system level.

4.1.2. Test classes. This paragraph shall describe the types or classes of tests that will be performed (for example, timing tests, erroneous input tests, maximum capacity tests).

4.1.3. General test conditions. This paragraph shall describe conditions that apply to all of the tests or to a group of tests. For example: “Each test shall include nominal, maximum, and minimum values;” “each test of type x shall use live data;” “execution size and time shall be measured for each CSCI.” Included shall be a statement of the extent of testing to be performed and rationale for the extent selected. The extent of testing shall be expressed as a percentage of some well defined total quantity, such as the number of samples of discrete operating conditions or values, or other sampling approach. Also included shall be the approach to be followed for retesting/regression testing.

4.1.4. Test progression. In cases of progressive or cumulative tests, this paragraph shall explain the planned sequence or progression of tests.

4.1.5. Data recording, reduction, and analysis. This paragraph shall identify and describe the data recording, reduction, and analysis procedures to be used during and after the tests identified in this STP. These procedures shall include, as applicable, manual, automatic, and semiautomatic techniques for recording test results, manipulating the raw results into a form suitable for evaluation, and retaining the results of data reduction and analysis.

4.2. Planned tests. This paragraph shall be divided into the following subparagraphs to describe the total scope of the planned testing.

4.2.1. Item(s) to be tested. This paragraph shall identify a CSCI, subsystem, system, or other entity by name and project-unique identifier, and shall be divided into the following subparagraphs to describe the testing planned for the item(s). (Note: the “tests” in this plan are collections of test cases. There is no intent to describe each test case in this document.)

4.2.1.1. Project-unique identifier of a test. This paragraph shall identify a test by project-unique identifier and shall provide the information specified below for the test. Reference may be made as needed to the general information in 4.1.

- a. Test objective
- b. Test level
- c. Test type or class
- d. Qualification method(s) as specified in the requirements specification
- e. Identifier of the CSCI requirements and, if applicable, software system requirements addressed by this test. (Alternatively, this information may be provided in Section 5.)
- f. Special requirements (for example, 48 hours of continuous facility time, extent of test, use of a special input or database)
- g. Type of data to be recorded

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h. Type of data recording/reduction/analysis to be employed

i. Assumptions and constraints, such as anticipated limitations on the test due to system or test conditions – timing, interfaces, equipment, personnel, database, etc.

j. Security and privacy considerations associated with the test

4.3. Test schedules. This section shall contain or reference the schedules for conducting the tests identified in this plan. It shall include:

a. A listing or chart depicting the sites at which the testing will be scheduled and the time frames during which the testing will be conducted

b. A schedule for each test site depicting the activities and events listed below, as applicable, in chronological order with supporting narrative as necessary:

1) On-site test period and periods assigned to major portions of the testing

2) Pretest on-site period needed for setting up the software test environment and other equipment, system debugging, orientation, and familiarization

3) Collection of database/data file values, input values, and other operational data needed for the testing

4) Conducting the tests, including planned retesting

5) Preparation, review, and approval of the Software Test Report (STR)

5. Requirements traceability. This paragraph shall contain:

a. Traceability from each test identified in this plan to the CSCI requirements and, if applicable, software system requirements it addresses. (Alternatively, this traceability may be provided in 4.2.x.y and referenced from this paragraph.)

b. Traceability from each CSCI requirement and, if applicable, each software system requirement covered by this test plan to the test(s) that address it. The traceability shall cover the CSCI requirements in all applicable Software Requirements Specifications (SRSs) and associated Interface Requirements Specifications (IRSs), and, for software systems, the system requirements in all applicable System/Subsystem Specifications (SSSs) and associated system-level IRSs.

6. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendices. Appendices may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendices may be bound as separate documents for ease in handling. Appendices shall be lettered alphabetically (A, B, etc.).

SPECIALIZED SCRIPTS

Content.

- Code
- Scripts
- Architectural configurations
- Development/configuration information
- Strategies
- Procedures
- Processing rules

Format. Contractor developed.

TEST REPORT

Software Test Report Template

Description: The Software Test Report (STR) is a record of the qualification testing performed on a CSCI, a software system or subsystem, or other software-related item. The STR enables the acquirer to assess the testing and its results.

This template contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the Contract. This template is used when the developer is tasked to analyze and record the results of CSCI qualification testing, system qualification testing of a software system, or other testing identified in the Contract.

The following paragraphs identify the STR content requirements.

1. Scope. This section shall be divided into the following paragraphs.

1.1. Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2. System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the program sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3. Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this report. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Overview of test results. This section shall be divided into the following paragraphs to provide an overview of test results.

3.1. Overall assessment of the software tested. This paragraph shall:

- a. Provide an overall assessment of the software as demonstrated by the test results in this report
- b. Identify any remaining deficiencies, limitations, or constraints that were detected by the testing performed. Problem/change reports may be used to provide deficiency information.
- c. For each remaining deficiency, limitation, or constraint, describe:
 - 1) Its impact on software and system performance, including identification of requirements not met
 - 2) The impact on software and system design to correct it
 - 3) A recommended solution/approach for correcting it

3.2. Impact of test environment. This paragraph shall provide an assessment of the manner in which the test environment may be different from the operational environment and the effect of this difference on the test results.

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3.3. Recommended improvements. This paragraph shall provide any recommended improvements in the design, operation, or testing of the software tested. A discussion of each recommendation and its impact on the software may be provided. If no recommended improvements are provided, this paragraph shall state “None.”

4. Detailed test results. This section shall be divided into the following paragraphs to describe the detailed results for each test. Note: The word “test” means a related collection of test cases.

4.1. Project-unique identifier of a test. This paragraph shall identify a test by project-unique identifier and shall be divided into the following subparagraphs to describe the test results.

4.1.1. Summary of test results. This paragraph shall summarize the results of the test. The summary shall include, possibly in a table, the completion status of each test case associated with the test (for example, “all results as expected,” “problems encountered,” “deviations required”). When the completion status is not “as expected,” this paragraph shall reference the following paragraphs for details.

4.1.2. Problems encountered. This paragraph shall be divided into subparagraphs that identify each test case in which one or more problems occurred.

4.1.2.y. Project-unique identifier of a test case. This paragraph shall identify by project-unique identifier a test case in which one or more problems occurred, and shall provide:

- a. A brief description of the problem(s) that occurred
- b. Identification of the test procedure step(s) in which they occurred
- c. Reference(s) to the associated problem/change report(s) and backup data, as applicable
- d. The number of times the procedure or step was repeated in attempting to correct the problem(s) and the outcome of each attempt
- e. Back-up points or test steps where tests were resumed for retesting

4.1.3. Deviations from test cases/procedures. This paragraph shall be divided into subparagraphs that identify each test case in which deviations from test case/test procedures occurred.

4.1.3.y. Project-unique identifier of a test case. This subparagraph shall identify by project-unique identifier a test case in which one or more deviations occurred, and shall provide:

- a. A description of the deviation(s) (for example, test case run in which the deviation occurred and nature of the deviation, such as substitution of required equipment, procedural steps not followed, schedule deviations). (Red-lined test procedures may be used to show the deviations)
- b. The rationale for the deviation(s)
- c. An assessment of the deviations’ impact on the validity of the test case

5. Test log. This section shall present, possibly in a figure or appendix, a chronological record of the test events covered by this report. This test log shall include:

- a. The date(s), time(s), and location(s) of the tests performed
- b. The hardware and software configurations used for each test including, as applicable, part/model/serial number, manufacturer, revision level, and calibration date of all hardware, and version number and name for the software components used

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c. The date and time of each test-related activity, the identity of the individual(s) who performed the activity, and the identities of witnesses, as applicable

6. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendices. Appendices may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendices may be bound as separate documents for ease in handling. Appendices shall be lettered alphabetically (A, B, etc.).

IMPLEMENTATION PLAN

Implementation Plan Template

Description: The Implementation Plan (IP) identifies the hardware, software, and other resources needed for life cycle support of deliverable software and describes the developer's plans for transitioning deliverable items to the Sustainment entity. The IP is developed if the software support concept calls for transition of responsibility from the developer to a separate Sustainment entity.

The following paragraphs identify the IP content requirements.

1. Scope. This section shall be divided into the following paragraphs.

1.1. Identification. This paragraph shall contain a full identification of the system and software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2. System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the program sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3. Document overview. This paragraph shall summarize the purpose and contents of this manual and shall describe any security or privacy considerations associated with its use.

1.4. Relationship to other plans. This paragraph shall describe the relationship, if any, of the IP to other program management plans.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Software support resources. This section shall be divided into paragraphs to identify and describe the resources needed to support the deliverable software. These resources shall include items needed to control, copy, and distribute the software and its documentation, and to specify, design, implement, document, test, evaluate, control, copy, and distribute modifications to the software.

3.1. Facilities. This paragraph shall describe the facilities needed to support the deliverable software. These facilities may include special buildings, rooms, mock-ups, building features such as raised flooring or cabling; building features to support security and privacy requirements (shielding, vaults, etc.), building features to support safety requirements (smoke alarms, safety glass, etc.), special power requirements, and so on. The purpose of each item shall be described. Diagrams may be included as applicable.

3.2. Hardware. This paragraph shall identify and describe the hardware and associated documentation needed to support the deliverable software. This hardware may include computers, peripheral equipment, hardware simulators, stimulators, emulators, diagnostic equipment, and non-computer equipment. The description shall include:

- a. Specific models, versions, and configurations
- b. Rationale for the selected hardware

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c. Reference to user/operator manuals or instructions for each item, as applicable

d. Identification of each hardware item and document as acquirer-furnished, an item that will be delivered to the Sustainment entity, an item the Sustainment entity is known to have, an item the Sustainment entity must acquire, or other description of status

e. If items must be acquired, information about a current source of supply, including whether the item is currently available and whether it is expected to be available at the time of delivery

f. Information about manufacturer support, licensing, and data rights, including whether the item is currently supported by the manufacturer, whether it is expected to be supported at the time of delivery, whether licenses will be assigned to the Sustainment entity, and the terms of such licenses

g. Security and privacy considerations, limitations, or other items of interest

3.3. Software. This paragraph shall identify and describe the software and associated documentation needed to support the deliverable software. This software may include computer-aided software engineering (CASE) tools, data in these tools, compilers, test tools, test data, simulations, emulations, utilities, configuration management tools, databases and data files, and other software. The description shall include:

a. Specific names, identification numbers, version numbers, release numbers, and configurations, as applicable

b. Rationale for the selected software

c. Reference to user/operator manuals or instructions for each item, as applicable

d. Identification of each software item and document as acquirer-furnished, an item that will be delivered to the Sustainment entity, an item the Sustainment entity is known to have, an item the Sustainment entity must acquire, or other description of status

e. If items must be acquired, information about a current source of supply, including whether the item is currently available and whether it is expected to be available at the time of delivery

f. Information about vendor support, licensing, and data rights, including whether the item is currently supported by the vendor, whether it is expected to be supported at the time of delivery, whether licenses will be assigned to the Sustainment entity, and the terms of such licenses

g. Security and privacy considerations, limitations, or other items of interest

3.4. Other documentation. This paragraph shall identify any other documentation needed to support the deliverable software. The list will include, for example, plans, reports, studies, specifications, design descriptions, test cases/procedures, test reports, user/operator manuals, and support manuals for the deliverable software. This paragraph shall provide:

a. Names, identification numbers, version numbers, and release numbers, as applicable

b. Rationale for including each document in the list

c. Identification of each document as acquirer-furnished, an item that will be delivered to the Sustainment entity, an item the Sustainment entity is known to have, an item the Sustainment entity must acquire, or other description of status

d. If a document must be acquired, information about where to acquire it

e. Information about licensing and data rights

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f. Security and privacy considerations, limitations, or other items of interest

3.5. Personnel. This paragraph shall describe the personnel needed to support the deliverable software, including anticipated number of personnel, types and levels of skills and expertise, and security clearances. This paragraph shall cite, as applicable, actual staffing on the development program as a basis for the staffing needs cited.

3.6. Other resources. This paragraph shall identify any other resources needed to support the deliverable software. Included may be consumables such as magnetic tapes and diskettes, together with an estimate of the type and number that should be acquired.

3.7 Interrelationship of components. This paragraph shall identify the interrelationships of the components identified in the preceding paragraphs. A figure may be used to show the interrelationships.

4. Recommended procedures. This section shall be divided into paragraphs as needed to describe any procedures, including advice and lessons learned, that the developer may wish to recommend to the Sustainment entity for supporting the deliverable software and associated support environment.

5. Training. This section shall be divided into paragraphs as appropriate to describe the developer's plans for training support personnel to support of the deliverable software. This section shall include:

- a. The schedule, duration, and location for the training
- b. The delineation between classroom training and "hands on" training
- c. Provision (either directly or by reference) for:
 - 1) Familiarization with the operational software and target computer(s)
 - 2) Familiarization with the support software and host system

6. Anticipated areas of change. This section shall describe anticipated areas of change to the deliverable software.

7. Transition planning. This section shall be divided into paragraphs as needed to describe the developer's plans for transitioning the deliverable software to the Sustainment entity. This section shall address the following:

- a. All activities to be performed to transition the deliverable software to the Sustainment entity. These activities may include planning/coordination meetings; preparation of items to be delivered to the Sustainment entity; packaging, shipment, installation, and checkout of the software support environment; packaging, shipment, installation, and checkout of the operational software; and training of support personnel.
- b. Roles and responsibilities for each activity
- c. The resources needed to carry out the transition activities and the source from which each resource will be provided
- d. Schedules and milestones for conducting the transition activities. These schedules and milestones shall be compatible with the Contract master schedule.
- e. Procedures for installation and checkout of deliverable items in the support environment

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8. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendices. Appendices may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendices may be bound as separate documents for ease in handling. Appendices shall be lettered alphabetically (A, B, etc.).

CONFIGURATION MANAGEMENT PLAN

Configuration Management Plan Template

Description: The CM Plan describes the plan for assuring that the project has adequate control over all Configuration Items (Hardware (HWCIs) and Computer Software (CSCIs)) necessary for creating and supporting the customer.

1. Scope. The CM Plan defines the strategy and processes that will be employed to satisfy the contract requirements for Configuration Identification, Configuration Control, Status Accounting and Configuration Audits throughout the IGC contract performance period.

2. Requirements. The following paragraphs describe the requirements for generation of the CM Plan in response to the IGC Performance Work Statement (PWS).

- Introduction
- Scope
- References
- CM Organization and Responsibilities
- CM Resources
- Objectives
- Outstanding Issues
- Approvals

3. Introduction. This section should include a brief overview of the Government program and the CM activities that will be implemented.

4. Organization and Roles & Responsibilities. Specify Contractor's organizational groups involved in the CM process and describe the roles and responsibilities of each group.

5. Resources. This section describes the specific resources involved with supporting the CM activities. It should identify existing resources and plans for obtaining required staff, hardware, software, office space, etc.

6. Configuration Management Activities. Identify the configuration management activities to be performed and relate these activities to the responsible organizational groups. Examples of configuration management activities are identify configuration items, build product baselines, issue CM Library report, track changes in the baseline, etc.

6.1. Configuration Identification - Define what types of items will be controlled in the project, such as software, hardware, documentation. Also define the documentation scheme used to identify the items (i.e. filenames, CI identifiers, labels, etc). Reference the *Version Identification Procedure*, if applicable.

6.2. Configuration Items (CIs) - List each configuration item, when it will be put under control, and the person responsible for each item.

6.3. Product Baselines - Identify the product baselines. If more than one, show which CIs makeup each baseline. Describe when and how baselines are produced.

6.4. Configuration Library - Describe any tasks associated with using the Configuration Library (i.e. submitting CIs, deleting CIs, retrieving CIs).

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6.5. Change Control - Describe the mechanism for controlling changes to the items under configuration management. Include details of initiation, recording, review, approval, tracking, and closure. Reference the *Change Control Procedure*, if applicable.

6.6. Support Software - Describe any special procedures for controlling support software (i.e. tools, drivers, test data).

6.7. Release Procedure - Describe plans for releasing deliverables to the customer. Reference can be made to the *Release Procedure*, if applicable.

7.0. Tools and Techniques. This section describes any tools or techniques required for performing the CM tasks. For example, there may be tools to manage access to the Library, tools to request changes, tools for status reporting, etc.

8.0. Configuration Reports. This section describes the reports issued by the Configuration Librarian. It also includes the frequency and the distribution of the reports. Reports to be considered are:

- i. CI Detailed Report
- ii. CI Change History
- iii. CI Status
- iv. Released Items
- v. Product Baseline Status
- vi. Results of Audits.

9.0. Archiving. This section describes what items are archived and for how long.

10.0. Audits and Reviews. This section describes any audits or reviews of the configuration management process or library that will be conducted during the project (i.e. audit of product baseline, audit of Configuration Library, review of CM Plan).

11.0. Outstanding Issues. This section identifies any issues associated with implementation of the Contractor CM Program. Recommendations for actions or support required on the part of the Government should be addressed within this section.

12.0. Approval. This section describes the Contractor and recommended Government approval processes required to support CM.

13.0. CM Plan Outline. The following outline includes content and recommended format requirements for the Contractor's CM Plan. While the contractor's format is acceptable the CM Plan must address the content requirements described above and identified in the following outline.

1.0 Introduction

- Purpose
- Scope
- Definitions
- References

2.0 Configuration Management

- Organization

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- Responsibilities
- Relationship of CM to life cycle of project
 - Interfaces to other organizations on the project
 - Other project organizations CM responsibilities

3.0 Configuration Management Activities

3.1 Configuration Identification

3.1.1 Specification Identification

- Labeling and numbering scheme for documents and files
- How identification between documents and files relate
- Description of identification tracking scheme
- When a document / file identification number enters controlled status
- How the identification scheme addresses versions and releases
- How the identification scheme addresses hardware, application system software, COTS products, support software (e.g., test data and files), etc.

3.1.2 Change control form identification

- Numbering scheme for each of the forms used

3.1.3 Project Baselines

- Identify various baselines for the project
- For each baseline created provide the following information:
 - How and when it is created
 - Who authorizes and who verifies it
 - The purpose
 - What goes into it (software and documentation)

3.1.4 Library

- Identification and control mechanisms used
- Number of libraries and the types
- Backup and disaster plans and procedures
- Recovery process for any type of loss
- Retention policies and procedures
 - What needs to be retained, for who, and for how long
 - How is the information retained (on-line, off-line, media type and format)

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3.2 Configuration Control

3.2.1 Procedures for changing Baselines (procedures may vary with each baseline)

3.2.2 Procedures for processing change requests and approvals-change classification scheme

- Change reporting documentation
- Change control flow diagram

3.2.3 Organizations assigned responsibilities for change control

3.2.4 Change Control Boards (CCBs) – describe and provide the following information for each:

- Charter
- Members
- Role
- Procedures
- Approval Mechanisms

3.2.5 Interfaces, overall hierarchy, and the responsibility for communication between multiple CCBs, when applicable

3.2.6 Level of control – identify how it will change throughout the life cycle, when applicable

3.2.7 Document revisions – how they will be handled

3.2.8 Automated tools used to perform change control

3.3 Configuration Status Accounting

3.3.1 Storage, handling and release of project media

3.3.2 Types of information needed to be reported and the control over this information that is needed

3.3.3 Reports to be produced (e.g., management reports, QA reports, CCB reports) and who the audience is for each and the information needed to produce each report

3.3.4 Release process, to include the following information:

- What is in the release
- Who the release is being provided to and when
- The media the release is on
- Any known problems in the release
- Any known fixes in the release
- Installation instructions

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3.3.5 Document status accounting and change management status accounting that needs to occur

3.4 Configuration Audits

3.4.1 Number of audits to be done and when they will be done (internal audits as well as configuration audits); for each audit provide the following:

- Which baseline it is tied to, if applicable
- Who performs the audit
- What is audited
- What is the CM role in the audit, and what are the roles of other organizations in the audit
- How formal is the audit

3.4.2 All reviews that CM supports; for each provide the following:

- The materials to be reviewed
- CM responsibility in the review and the responsibilities of other organizations

4.0 CM Milestones

- Define all CM project milestones (e.g., baselines, reviews, audits)
- Describe how the CM milestones tie into the software development process
- Identify what the criteria are for reaching each milestone

5.0 Training

- Identify the kinds and amounts of training (e.g., orientation, tools)

6.0 Subcontractor / Vendor Support

- Describe any subcontractor and / or vendor support and interfacing, if applicable.

RISK MANAGEMENT PLAN

Risk Management Plan Template

I. RISK MANAGEMENT OBJECTIVES

The objectives of the risk management plan are:

- To focus attention on minimizing threats to achievement of the project objectives.
- To provide an approach for:
 - Identifying and assessing risks.
 - Determining cost-effective risk reduction actions.
 - Monitoring and reporting progress in reducing risk.

The overall goal of this process is to progressively reduce the project's exposure to events that threaten the accomplishment of its objectives by:

- Incorporating approaches into the project plans that minimize or avoid identified risks,
- Developing proactive, contingent risk response actions, and
- Rapidly implementing risk responses based on timely identification of risk occurrence.

II. RISK MANAGEMENT RESPONSIBILITIES

The project manager will conduct risk management activities to address those risks that are pertinent to the project. The project manager will employ the assistance of members of the project team, project advisors and business lead as appropriate.

Overview of Project Risk Management Activities

Project

- Develop and maintain Project Risk List, Mitigation/Contingency Plan
- Assess and analyze risks
- Incorporate risk responses into the project plans (schedule, budget, tradeoff analysis)
- Monitor and identify risk occurrence
- Implement risk response contingency plans based on risk occurrence
- Document and report risks via a project risk watch list

Overview of Risk Reporting

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To provide visibility of risks and progress in mitigating them, the risk watch list will be reviewed bi-weekly by the project team. If necessary, risk occurrences will be elevated to the business lead and project sponsors for their attention.

III. RISK MANAGEMENT PROCESS

The general risk management process to be followed by the project is as follows:

RISK IDENTIFICATION/DESCRIPTION

- ☐ Review planning documents:
 - Deliverables and work processes
 - Milestones and schedule dates
 - Resource estimates/needs/sources
 - Performance requirements
- ☐ Talk with appropriate stakeholders and other experts to develop a comprehensive list of risks.
- ☐ Investigate the various sources and symptoms of risks to aid in subsequent determination of risk controllability and selection of appropriate risk response actions.

RISK Analysis

Quantify rough likelihood of occurrence and severity of impact, Impact Horizon and Controllability

- ☐ Assess Likelihood of Occurrence
 - Eliminate any risks which, on reflection, you believe will not occur.
 - Roughly classify the remaining risks as very likely or not likely to occur. Try to quantify "very likely" and "not likely" if possible.
- ☐ Assess Severity of Impact
 - Evaluate each risk in terms of its possible impact on the project's baseline of effort/cost, time (schedule), and requirements (scope, performance, acceptance, and quality).
 - Eliminate any risks, which you believe have no, or only trivial impact on the baselines.

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- Roughly classify the remaining risks as big or little impact. Try to quantify "big impact" or "little impact" if possible.

- ☐ Assign a value from “1” to “4” to each risk for each of the following:

3

Very Likely, Little Impact

1

Very Likely, Big Impact

4

Not Likely

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Little Impact

2

Not Likely,

Big Impact

Impact Horizon

- Assign either short term or long term. Try to quantify what you mean by "short term" or "long term". Whenever possible, assign the appropriate phase or phases. The ultimate goal is to assign an exact date when you expect the potential risk event to occur.

Controllability

Controllability Assessment

Project risk can be controlled within the project team and/or company. Internal

External forces control project risk. External

RISK PRIORITY #

Prioritize the risks. On the basis of your rough assessments, assign a prioritization number for the potential risk event.

☐ Prioritize Risks

- Prioritize the identified risks on the basis of the rough risk evaluation (likelihood of occurrence and severity of impact), Impact Horizon, and Risk Controllability.

RISK HANDLING STRATEGIES

☐ Your risk evaluation steps and the subsequent risk prioritization are crucial to developing risk response strategies. The choices are eliminate the cause, reduce the likelihood of occurrence, reduce the impact and accept the risk event. The project manager may choose one or a combination

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RISK RESPONSE AREAS

☐ Essentially, all risk response strategies have an impact on the time, cost, quality, and external considerations such as the impact on other projects and the company as a whole. (Refer to the Strategic Risk Opportunity and Assessment Model to help evaluate external considerations). Mark this column a t, c, q or e.

RISK RESPONSE STRATEGY IMPLEMENTATION Resources Needed

☐ To implement the selected strategy (ies) for each potential risk event, resources are needed. Cost estimates and schedule estimates for the implementation must be updated and the differences between the baseline and the additional resources must be accounted for.

ASSIGNMENTS

☐ Make specific assignments to individuals. Put their names in this column.

MONITOR RISK STATUS

☐ As work is performed, monitor and assess:

~ Progress in reducing risk ,

~ Occurrence of risks that call for initiation of contingent risk responses,

~ Effectiveness of implemented risk reduction actions and any needs to modify these actions.

MAINTAIN THE RISK WATCH LIST

☐ Update the Risk Watch List to reflect the results of monitoring risk status. Also reflect the effect of any project re-planning changes and/or change controls.

REPORT THE RISK WATCH LIST PROGRESS

☐ The Risk Watch List is should be discussed at project team meetings and specific risks should be elevated to the business lead and project sponsors as appropriate.

Project Risk Watch

☐ The following items are on the project's risk watch:

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<u>Risk ID #</u>	<u>WB S #</u>	<u>Risk Identification/ Description</u>	<u>Risk Analysis</u> (1 to 4)	<u>Risk Impact Time Horizon</u> (short term or long term/ phase/date)	<u>Risk Control</u> (internal or external)	<u>Risk Priority #</u>	<u>Area of Impact</u> (time, cost quality, other projects)	<u>Response Strategy(ies)</u> C(reduce likelihood, reduce impact) Avoid Assume Transfer)	<u>Response Strategy(ies)</u> Implementation <u>Resources</u> <u>Needed</u>	<u>Assigned Person to handle risk</u>	<u>Date Completed</u> MM/DD /YEAR
1											
2											
3											
4											
5											
6											
7											
<u>Risk ID #</u>	<u>WB S #</u>	<u>Risk Identification/ Description</u>	<u>Risk Evaluation</u> (1 to 4)	<u>Risk Impact Time Horizon</u> (short term or long term/ phase/date)	<u>Risk Control</u> (internal or external)	<u>Risk Priority #</u>	<u>Area of Impact</u> (time, cost quality, other projects)	<u>Response Strategy</u> (Eliminate, reduce likelihood, reduce impact, accept, transfer)	<u>Response Strategy</u> Implementation <u>Resources</u> <u>Needed</u>	<u>Assigned Person to handle risk</u>	<u>Date Completed</u> MM/DD /YEAR
8											

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9											
10											
11											
12											
13											
14											

SYSTEMS SECURITY AUTHORIZATION AGREEMENT/APPLICATION SYSTEM SECURITY PLAN

Systems Security Authorization Agreement/Application System Security Template

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A. PURPOSE

The purpose of this document is to provide DLA with amplifying certification and accreditation guidance, a document template (i.e. Application System Security Plan (ASSP) and ASSP Exemption Request Letter), and instruction when making a determination to install or migrate an application into an enclave's infrastructure (e.g., site local area network (LAN), DLA Enterprise Data Center (EDC)) in accordance with DLA policy.

B. SCOPE

This document is applicable to all DLA applications as defined herein. This document should be used to develop an ASSP where applicable. The ASSP should be appended to the corresponding enclave's System Security Authorization Agreement (SSAA), *(To include a site or system accreditation) as an appendix (e.g. SSAA Template, Appendix I, Applicable System Development Artifacts or System Documentation).*

Department of Defense (DOD) Directive 8500.1, Information Assurance, E2. Enclosure 2, Definitions, E.2.1.1, pg. 17 and the Committee on National Security Systems (CNSS) Instruction No. 4009, National Information Assurance Glossary, pg. 4 define an application as "A software program that performs a specific function directly for a user and can be executed without access to system control, monitoring or administrative privileges."

Applications within DLA that require special attention to security due to the risk and magnitude of harm resulting from the loss, misuse, or unauthorized access to or modification of the information in the application because of its importance to the DLA mission (to include its high development, operating, or maintenance costs and/or its significant role in the administration of agency programs, finances, property, or other resources), must be security certified and accredited either as a hosted component with corresponding security documentation (i.e., ASSP, ASSP Exemption Request) in an enclave's SSAA or accredited as a sole information system (i.e., system accreditation). An application may be a single software application (e.g., Integrated Consumable Items Support) or multiple software applications that are related to a single mission (e.g., payroll or personnel).

Applications that are undergoing security certification must have the security requirements of the application, a description of the IA controls in place or planned, assigned responsibilities, and expected behavior of all individuals who access the application formally documented. The documentation required by DLA to support applications undergoing security certification with the prospect of

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being approved to operate under an enclave's SSAA (e.g., DLA EDC accreditation) is an ASSP.

Note: *DLA applications meeting the criteria as written above must have a designated application owner, information technology (IT) manager, information assurance manager (IAM), information assurance officer (IAO), and application administrator.*

IT Chiefs, IAMs, and/or IAOs responsible for ensuring the development and maintenance of ASSPs should contact the DLA Headquarters (HQ) Certification and Accreditation (C&A) help desk for inquiries related to developing, maintaining, and processing ASSPs.

C. APPLICABILITY

The following is a checklist of application security functions that indicate the likelihood an ASSP should be developed and submitted for a target application. If any of the boxes below are checked, the target application most likely requires an ASSP.

NOTE: *This applies to applications undergoing security certification with the prospect of being approved to operate under an enclave's SSAA and accreditation.*

☐ Requires the use of Identification and Authentication (I&A) beyond what is provided by the operating system (OS) for access to the application (e.g., requires a user id and password, Common Access Card (CAC)).

☐ Discretionary Access Control (DAC) is enforced by the application for all associated resources/components (e.g., access is based on the user identity and/or group membership(s) associated with a user and established attributes associated with system/application resources).

- 1) Controls authorize or restrict the activities of users with access to the application.
- 2) Hardware or software features enforce only authorized access to or within the application, to restrict users to authorized transactions and functions, and/or to detect unauthorized activities (e.g., access control lists (ACL)).
- 3) Application users are restricted from accessing the operating system, other applications, or other system resources not needed in the performance of their duties/job function (e.g., least privilege).

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☐ The application performs auditing in support of user accountability for the application (*e.g., providing a trace of user actions*). Events recorded by the application's audit trail typically include: (1) *Date and time of the event*, (2) *type of event*, (3) *subject identity*, and (4) *the outcome (success or failure) of the event*).

D. ROLES AND RESPONSIBILITIES

DLA activities should complete the "ASSP Exemption Request" which contains the checklist shown above in "section C" for:

- 1) Any application that will be placed into operation within an enclave's accredited infrastructure (i.e., Site Local Area Network (LAN)) under the enclave's SSAA and no ASSP will be submitted.
- 2) Any application that will be migrated to the DLA EDC and included as an appended component within the EDC's accredited infrastructure and no ASSP will be submitted.

Note: All "ASSP Exemption Request" letters, to include applicable supplemental documentation will be forwarded to J-611 for review and concurrence/non-concurrence at least **30 working** days prior to the scheduled installation/migration into a DLA site's enclave (e.g., LAN) or the DLA EDC.

J-611 will review all "ASSP Exemption Request" letters submitted and provide concurrence or non-concurrence within **three (3) working days** of receipt of the letter.

- 1) If J-611 determines that an ASSP is not required the application should be included in the applicable appendix for the corresponding SSAA (e.g., DLA EDC SSAA).
- 2) If J-611 determines that an ASSP is required the responsible site should prepare the ASSP in accordance with this document.

If J-611 concurrence is given for an application(s) requested by a DLA site for exclusion of the ASSP requirement, that ASSP exempt application must be documented in the hosting enclave's/system's SSAA (e.g., DLA EDC SSAA). Along with updates to the hosting enclave's/system's SSAA for including ASSP exempt applications, the responsible individuals must also ensure any risks introduced to the accredited environment due to the introduction of the ASSP exempt applications are assessed and managed to maintain the acceptable level of risk that the accredited environment (e.g., DLA EDC) is approved to operate under.

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Prior to migration and/or installation the initial development, completion, and submission of **version 1.0** of an ASSP is the responsibility of the DLA site/activity IT Chief, IAM, and application owner.

ASSPs should be submitted to J-611 at least **30 working days** prior to the scheduled installation/migration of the target application into an accredited infrastructure.

Note: J-611 has made the determination to require the insertion of version numbers on ASSPs in an effort to further assist responsible IA personnel in the development, submission, tracking, and management these documents throughout the security certification and accreditation process as well as the application's life-cycle.

E. EDC APPLICATION SECURITY CERTIFICATION AND APPROVAL PROCESS

1. Upon receipt of ASSP(s), J-611 will have a maximum of **five (5) working days** to review the documentation, ensuring required information is included (e.g., deficiencies in a complete Plan of Actions and Milestones (POA&M)); and that all required certification activities (to include applicable vulnerability scans, security test and evaluation (ST&E)) have been accomplished.

Note: The **five (5) working day** timeline for J-611 to complete its initial review is subject to delay depending on the number of ASSPs submitted. J-611 will meet the **five (5) working day** review timeline as long as the number of individual ASSPs submitted at one time for a particular DLA site/activity does not exceed **20**. Any DLA site/activity submission of ASSPs that includes more than **20** will likely result in a delay meeting other prescribed timelines herein this document.

- 1.a. Should J-611 determine that the ASSP submitted does not convey all the required information or that certain certification activities have not been performed in accordance with stated requirements; the ASSP will be forwarded back to the DLA site/activity IT Chief, IAM, and/or application owner for corrective action and re-submission. The DLA site/activity IT Chief, IAM, and/or application owner will have **fifteen (15) working days** from the time of receipt to re-submit the ASSP. The **five (5) working days** timeline for J-611 to complete its review will re-commence on the date of re-submission.
- 1.b. At the completion of the review of **version 1.0** of the ASSP and validation that the ASSP conveys all stated requirements, J-611 **will forward the ASSP to the EDC IAM**.

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2. Upon receipt of the **version 1.0** of the ASSP the **EDC IAM will forward the ASSP to Team Hewlett Packard (HP)**. The application will undergo security compliance testing in the hosted environment (i.e., EDC infrastructure) and the ASSP will be updated accordingly to include all applicable updates and additions representing the application's hosting environment (i.e., DLA EDC).
 - 2.a. After completing all application security compliance testing and necessary updates to the ASSP, Team HP will forward the updated ASSP, to include all supplemental documentation (e.g., updated POA&M, test report(s), etc.) to the EDC IAM.
3. The EDC IAM will review the ASSP submitted by Team HP to validate that applicable updates have been included and that all necessary supplemental documentation has been appended. After the EDC IAM verifies the ASSP meets all stated requirements, the ASSP will then become **version 2.0** and should be titled as such when disseminated any further from this point.
 - 3.a. The EDC IAM will submit **version 2.0** of the ASSP to J-611 for formal certification and approval for inclusion in the EDC's SSAA.

Note: The timeline for the process between sections “**2. & 3.a.**” above will be **15 working days**. While J-611 recognizes that the time frame required for the activities between sections “**2. & 3.a.**” has been instituted to expedite and standardize submissions, recommendations, and management decisions. However, mitigating circumstances in some instances may prevent J-611, DLA sites/activities and/or Team HP from meeting the required time frame for submissions. All deviations from the time frame discussed above will be handled on a case-by-case basis.

4. At the completion of the J-611 final certification review of the ASSP(s) and validation that the application has successfully completed the applicable certification activities, the DLA certifying authority (CA) will certify the application and formalize an accreditation recommendation to be submitted to the Designated Approval Authority (DAA).

Note: Applications requiring an ASSP should not be installed or migrated into an accredited infrastructure without formal approval from the DLA CA and DAA.

1. ASSP TEMPLATE

Executive Summary

The Executive Summary should provide a quick high-level synopsis. It should be a one-page summation of the major aspects of the security plan.

1. System/Application Identification

1.1 *System/Application Name/Title*

- Provide the name of application and/or unique identifier.

1.2 *Responsible Organization*

- Identify the organization responsible for the application.

1.3 *Information Contact(s)*

- The owner(s) of the application/data, application administrator(s), and responsible IT Chief should be identified. Information provided should include at a minimum the following:
 - ▶ *Name*
 - ▶ *Title*
 - ▶ *Address*
 - ▶ *Phone Number*
 - ▶ *Fax Number*
 - ▶ *E-mail Address*

	Application/Data Owner	Application Administrator(s)	Cognizant IT Chief
Name			
Address			
Phone Number			
Fax Number			

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E-mail Address			
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1.4 *IA Personnel*

- Identify the responsible IA personnel (*e.g., Terminal Area Security Officer (TASO), IAM, IAO*) including alternate and emergency contacts, in relation to the application. Information provided should include at a minimum the following:
 - ▶ *Name*
 - ▶ *IA Function (Title)*
 - ▶ *Address*
 - ▶ *Phone Number*
 - ▶ *Fax Number*
 - ▶ *E-mail Address*

1.5 *Application Life-Cycle Status*

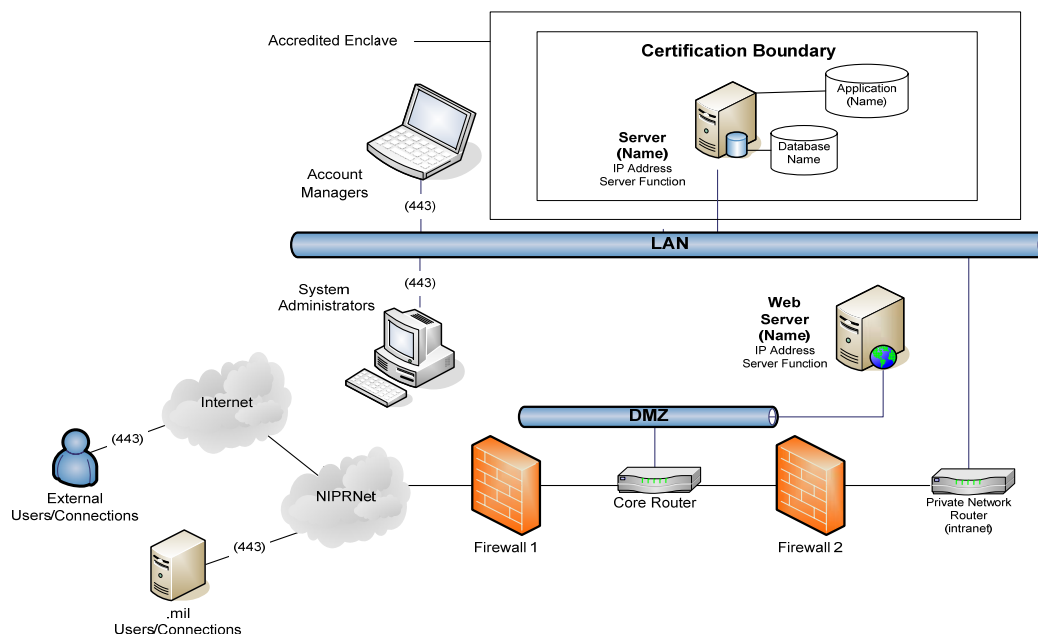
- Identify the application's current life-cycle status. For applications that include several modules that are at different life-cycle levels, identify the module and life-cycle level for each module.
 - ▶ *Operational (including legacy applications)*
 - ▶ *Undergoing a major modification*
 - ▶ *Emerging*

1.6 *General Description/Purpose*

- Describe the function or purpose of the application and the data processed, stored, transmitted, and displayed.
- Describe the processing flow of the application from input to output (*Include a flowchart/diagram depicting data flow see example below*).

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High Level Example of an Application Data flow Diagram



- Identify the type of application users (e.g., DOD Civilian, Military, Foreign Nationals, and Contractors) to include the user organization (e.g., DLA, external DOD, Federal agencies, private industry). (See the example below)

User Type	IT-Level	Data Access
Application Functional Regular	IT-2 or IT-3	Sensitive Unclassified/Unclassified
Application Functional Privileged	IT-1 or IT-2	Sensitive Unclassified /Unclassified
Foreign Nationals	IT-2 or IT-3 (depending on job function)	Sensitive Unclassified /Unclassified
IT-Regular	IT-3- Non-Sensitive	Sensitive Unclassified /Unclassified
IT-Elevated	IT-2-Noncritical Sensitive	Sensitive Unclassified /Unclassified
IT-Privileged	IT-1-Critical Sensitive	Sensitive Unclassified /Unclassified

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- Identify type of data being processed, stored, transmitted, and/or displayed.
- Provide a brief description of application functions (*i.e., contract administration, logistics support, etc.*) and users functions (*i.e., buyer, contract specialist, etc.*).
- Include a technical description (*logical and physical architecture*) of the application and each interface (to include diagrams) or reference to a source document including this description. The technical description will also include a brief description of the host platform and environment where the application is hosted (*this information may be included by reference to the applicable SSAA*).
- Within the technical description, identify each component that establishes the application certification boundary.
- Provide a list of the ports, protocols and services required to support the application (*i.e., 443, SSL, Secure FTP, etc.*).
- Provide confirmation as to whether or not the ports, protocols, and services have been registered in accordance with DOD Instruction 8551.1, Ports, Protocols, and Services Management (PPSM), http://www.dtic.mil/whs/directives/corres/pdf/i85511_081304/i85511p.pdf

2. Application Interconnection Agreements

Identify Memorandum(s) of understanding (MOU) or Memorandum(s) of agreement (MOA) in-place to facilitate connection with other agency systems and/or applications for the purpose of sharing sensitive data/information. Include a copy of the agreement as an attachment to this ASSP. The written agreement should detail the applicable rules of behavior and IA controls that must be maintained by the interconnecting systems/applications.

- Identify both internal and external system/application interfaces (*if applicable*) and TCP/IP port requirements.

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Internal System/Application Interface		Type of Interface & Protocol	TCP-Ports
From	To		

External Interface		Type of Interface & Protocol	TCP-Ports
From	To		

- List names of any internal and external system/application interfaces supporting the application.
- Provide a technical description of communication services supporting each interface. Identify the source and destination address for each interface.
- A description of the rules for interconnecting applications/systems and for protecting shared data must be included with this security plan.
- Provide the status of any Memorandums of Agreement (MOA), Memorandum of Understanding (MOU), or similar document(s) that establish the agreement between the application owner and external interface owner(s).

3. Mission Assurance Category and Data Sensitivity Determination

Mission Assurance Category (MAC) Designation

- Identify the MAC designation (e.g., MAC I,II,III)
Note: *Criteria for determining the MAC designation for a system/application can be referenced in Department of Defense (DOD) Instruction 8500.2, Enclosure 2.*

Data Sensitivity Designation

- Identify the data sensitivity level assigned (e.g., Sensitive Unclassified (FOUO, Privacy Act Data, etc.), Unclassified (i.e., publicly releasable)
Note: *The designated MAC level determination in conjunction with the data sensitivity classification should be used to determine the applicable IA controls in accordance with DOD Instruction 8500.2.*

4. Information Assurance Controls

This section should include a description of the IA control measures that are intended to meet the protection requirements identified in accordance with DoD Instruction 8500.2 (See, the DLA Application Test and Evaluation Plan and DLA policy.

4.1 Risk Assessment

- Describe the risk assessment methodology used to identify the threats and vulnerabilities of the application. Make sure the methodology specifically identifies threats, vulnerabilities, and additional application security controls required/implemented to mitigate risks.
Note: *The risk assessment performed will focus exclusively on the threats inherent to the application (e.g., application users and administrators). The greatest harm/disruption to an application comes from vulnerabilities exploited by users, both intentional and unintentional.*
- Assessing the risk to an application should be an ongoing effort to ensure that newly identified vulnerabilities are appropriately mitigated.
- Provide date(s) the review was conducted. (Note: Include a copy of the application risk assessment as an appendix to this document. Indicate if an application risk assessment was not performed.)

4.2 Rules of Behavior

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- Describe the rules of behavior implemented for this application (*i.e., general users, administrators, developers*) and the process employed for ensuring their acknowledgement and receipt.
- Attach a copy of any application unique rules of behavior implemented as an appendix to this security plan.

4.3 *IA Controls Implementation*

- Describe the application IA controls implemented or being implemented to provide the required level of assurance for secure operation. The following focus areas and associated controls should be referenced when identifying required IA controls. (*IA controls identified and implemented will be contingent on whether or not the application is currently in operation or is an emerging system currently under development.*)
- Applicable IA controls should be referenced in DoD Instruction 8500.2, and security assessments (*i.e., Security Test and Evaluation (ST&E)*) can performed utilizing the DLA Application Test and Evaluation Plan located on eWorkplace. At a minimum, the following type of controls must be addressed:

4.3.1. *Identification and Authentication (I&A)*

<i>Control</i>	<i>Implementation</i>
Describe the application's authentication control features, and the method of user authentication for access to the application (<i>e.g., password, Common Access Card (CAC), biometrics</i>).	
Indicate the frequency of password changes (<i>if applicable</i>), describe how changes are enforced, and identify who changes the passwords (<i>e.g., user, application, administrator</i>).	
Describe the protection measures in place for the user authentication mechanism (<i>e.g., passwords are encrypted, automatically generated, are checked against a dictionary of disallowed passwords, passwords are encrypted while in transmission</i>).	
Provide the number of invalid access attempts that may occur for a given logon/user identification (ID) and describe the actions taken when that limit is exceeded.	
Describe the procedures for verifying that all application default passwords have been changed.	

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Describe the procedures for limiting access scripts with embedded passwords (<i>e.g., scripts with embedded passwords are prohibited</i>).	
Describe any policies that provide for bypassing user authentication requirements, single-sign-on technologies (<i>e.g., host-to-host, authentication servers, and user-to-host identifiers</i>) and any compensating controls.	
Describe any use of Public Key (PKI) enabled applications and the standards used (<i>e.g., X.509 certificates</i>). Discuss the key management procedures for key generation, distribution, storage, and disposal.	
Describe the methodology employed for group authentication (<i>e.g., group authenticators are used only in conjunction with an individual authenticator</i>).	
Describe the authentication method used by web applications authenticating users (<i>e.g., client must authenticate the server, based on the server's DoD PKI X.509 Server certificate, and the server must authenticate the client, based on the user's DoD PKI certificate</i>).	

4.3.2. Access Control

Control	Implementation
Describe the enforcement of Discretionary Access Control (DAC) to application resources. (<i>e.g., access is based on the user identity and/or group membership(s) associated with a user and established attributes associated with system/application resources</i>).	
Provide the controls in place to authorize or restrict the activities of users with access to the application.	
Describe hardware or software features that are designed to permit only authorized access to or within the application, to restrict users to authorized transactions and functions, and/or to detect unauthorized activities (<i>e.g., access control lists</i>).	
Describe how access rights and privileges for the application are granted (<i>e.g., job function</i>).	
Describe the application's ability to enforce an ACL or register.	
Describe how application users are restricted from accessing the operating system, other applications, or other system resources not needed in the performance of their duties (<i>e.g., least privilege</i>).	

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Describe controls to detect unauthorized transaction attempts by authorized and/or unauthorized application users.	
Describe any restrictions to prevent users from accessing the application outside of normal work hours.	
Indicate after what period of user inactivity the application automatically disconnects inactive users or requires the user to enter a unique password before reconnecting to the application.	
Indicate if encryption is used to prevent access to sensitive files as part of the application access control procedures.	
Provide an example of the warning banner used prior to a user being granted authorized access to the application.	
If the public accesses the application, describe the additional security controls used to protect the integrity of the application (<i>e.g., public web servers accessible to external sources (i.e., .com, .net, and .org URLs) must provide a point-of-presence in a perimeter enclave DMZ (i.e., DISA DMZ or ETN DMZ).</i>	

4.3.3. *Audit Management*

<i>Control</i>	<i>Implementation</i>
Describe the audit trail procedures supporting user accountability for the application (<i>e.g., providing a trace of user actions</i>).	
Describe the design and implementation of audit trails to record appropriate information that can assist in intrusion detection.	
Describe the events recorded by the application's audit trail (<i>e.g., (1) Date and time of the event, (2) type of event, (3) subject identity, and (4) the outcome (success or failure) of the event</i>).	
Describe how the application prevents modifications to audit records (<i>e.g. unauthorized deletion</i>).	
Describe how the application administrator is provided with a clear indication (alarm) that the pre-defined audit record storage limit has been exceeded.	
Describe user read access restrictions enforced by the application.	

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Describe how audit records for Mission Assurance Category (MAC) I or II applications are backed up.	
Describe how frequently audit trails are reviewed and whether there are guidelines.	

4.3.4. *Review of Security Controls*

- List any independent security reviews conducted on the application in the last three years, if applicable.
- Include information about the type of security evaluation performed, who performed the review, the purpose of the review, the findings, and the actions taken as a result.

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Enclosure 1 – Appendices to the Application System Security Plan (ASSP)

The following are possible appendices to an ASSP; however not all appendices listed are always required. Appendices in **red font** are required **in all cases**. Appendices in **blue font** are required in **most cases**.

- a. Acronyms
- b. Definitions
- c. References
- d. ***Plan of Actions and Milestones (POA&M)***
- e. Rules of Behavior
- f. ***System/Application Interconnection Agreements*** (if applicable)
- g. ***Memorandums of Understanding/Agreement*** (if applicable)
- h. ***Configuration Management Plan***
- i. Disaster Recovery Plan (if applicable)
- j. ***Certification memo***
- k. System/Application Artifacts
- l. ***Test and Evaluation Plan/Report(s) (e.g., to include vulnerability scan reports (e.g., data-base scans, etc.)***

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Enclosure 2 – Plan of Actions and Milestones Template

The POAM template will be provided to the vendor after contract award.

TRAINING PLAN

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Preface

Document Version Control: It is the reader's responsibility to ensure they have the latest version of this document. Questions should be directed to the owner of this document, or the project manager.

Privacy Information

This document may contain information of a sensitive nature. This information should not be given to persons other than those who are involved in the ***Project Name*** project or who will become involved during the lifecycle.

1. Introduction

Describe the purpose of the training plan, and the organization of the document.

1.1 Scope

Describe the project and/or organizational boundaries of the training, such as initial training for system users, remedial training for the system maintenance staff, etc.

1.2 Objectives

Describe the objectives or expected results of the training. Express objectives as actions that the users will be expected to perform once they have been trained. A course outline may also be included. Reference Appendix A for example course outline.

1.3 Background

Provide a general description of the system, and an overview of the training curriculum.

1.4 References

Identify sources of information used to develop this document, such as IEEE or project documentation.

2. Training Requirements

Describe the general work environment (including equipment), and the skills for which training is required (management, business, technology, etc). The training audience should also be identified (category of user: upper management, system administrator, administrative assistant, etc.). It may also identify individuals or positions needing specific training. Include the time frame in which training must be accomplished.

2.1 Roles and Responsibilities

Identify the roles and responsibilities of the training staff, such as management of the training development and implementation; course presenters/ instructors; development and distribution of instructional materials, etc. It may also include the identification of other groups who may serve as consultants, such as members of the development team, experienced users, etc.

Note: Information for this section (2.1 Roles and Responsibilities) may appear in the system=s overall Work Breakdown Structure (WBS), which is typically appended to or associated with the system=s Project Plan. If so, simply reference the system=s WBS, or append the WBS to this document.

2.2 Training Evaluation

The effectiveness of training must continually be evaluated. Describe how training evaluation will be performed. Evaluation tools, forms, etc., should be included. Also describe the revision process with regard to the modification of the course and course materials resulting from the evaluations.

3. Training Strategy

Describe the type of training (e.g., classroom, CBT, etc.); and the training schedule (duration, sites, and dates). Longer lead times may be required for scheduling field site training. Some factors may include: adequacy of training facilities; accommodations; need to install system files; modem/communication issues; physical access to buildings, escorts needed within facilities, etc. Some of the aforementioned areas may also need to be addressed when training is performed locally (non-field training).

Note: It is suggested that a training log be developed to document and track information associated with individuals receiving training. Reference Appendix B for example training log.

3.1 Training Sources

Identify the source or provider for the training. Training may be internal (course developed in-house) or external (contracted to external training agencies).

3.2 Pilot Class

Once the training is developed, it should be presented to a test group that may include the training manager and staff, members of the development team, key users, representative members of the target audience, etc. The training is then revised based on recommendations from the pilot audience. Provide details about the proposed pilot class (audience, location, date, etc.).

3.3 Dependencies/Constraints/Limitations

Identify all known dependencies constraints, and or limitations that could potentially affect training on the project.

4. Training Resources

Identify all of the essential resources known to be associated with the specified training. This should include hardware/software, instructor availability, training time estimates, projected level of effort, system documentation, and other resources required to familiarize the trainer with the system, produce training materials, and provide the actual training. The identification and availability of other resource groups (as referenced in section 2.1 Roles and Responsibilities) should also be included.

5. Training Environment

Describe the equipment and conditions required for the training, including installations, facilities, and special databases (typically should be a separate, independent development/production environment. Also identify any actions required by other groups, such as users, to ensure all equipment is in place and specified conditions are met before the training.

6. Training Materials

Describes the types of training materials required for the training. The training materials developed may include visuals for overhead projectors, handouts, workbooks, manuals, computerized displays, and demonstrations.

Note: Training manuals or workbooks differ from the user manual. They are tutorial in nature and follow a functional, work flow approach to learning the system with a strong focus on "hands-on" exercises and examples.

During the development of training materials, it is helpful to identify at least one expert in the user community who can assist the trainer by describing the user environment and work flow and answering questions.

The training materials and curriculum should accurately reflect the system. Users should also be introduced to the user manual so they can use it as a learning and reference tool.

An instructor guide should also be developed. The guide is particularly useful after the initial training is completed, since subsequent training may occur at infrequent intervals.

6.1 Update/Revise Training Materials

Once training materials are developed and pilot-tested, they must be subjected to the same kind of configuration management process as the other system documentation. Training materials should remain current with system enhancements. To accomplish this, the training team should be included in distributions of release changes and provided sufficient time to update training materials before the next scheduled user training. Describe the change release process with regard to the training team, and how training materials will be kept updated.

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**Appendix A
Example Course Outline
Course Outline**

The training outline should list the training objectives and the training content. Note: Training will vary considerably depending upon the training objectives and the system structure. When the course outline has been approved, course development should begin. A sample training outline for a 1-day classroom training follows.

OBJECTIVES: Upon completion of the training, students will be able to accomplish the following.

1. Access the system.
2. Query the system.
3. Generate reports.

DURATION: 1-day session from 9:30 a.m. to 4:30 p.m.

MORNING SESSION: System Overview

Log on, Log off

Special Keys

Edits and Error Messages

Menus and Options

Work Flow Function 1 (repeat for other functions)

C What the function does

C Special functions unique to this option

C Exercise - Use the function

AFTERNOON SESSION: Function 2

Function 3

Special Features

Summary and/or Workshop Session(s)

Question and Answers

Evaluation

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**Appendix B
Example Training Log
Training Log**

Trainee Name	Date	Location	Description of Training	No. Hours	ID #	Comments

DESIGN SPECIFICATION

Design Specification Template

INTEGRATED DATA ENVIRONMENT (IDE)/GLOBAL TRANSPORTATION NETWORK (GTN) CONVERGENCE (IGC) DESIGN SPECIFICATION



Date
VERSION X.X

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1.0 INSTRUCTIONS

1.1 Introduction

The Design Specification is built during the Design Phase. The Design Specification shall detail each of the systems components of the solution release.

The contractor shall design components to ensure reutilization of existing GCSS-J Services, as well as existing/evolving tables, extract, transform, load (ETL) processes, and business intelligence (BI) solutions to the maximum extent possible

1.2 Objective

The primary goal of building the design spec is to document the detailed design of each component being built for the solution to answer the customer's requirements. The contractor shall take the Functional Specification from the Functional Phase and build the Design Specification, which details each of the functions into true executables.

At this phase the physical data model (PDM) will be created and fully attributed based upon the IDE/IGC Convergence (IGC) PDM standards. The PDM shall be an integrated PDM and shall utilize all existing touch points within the existing and evolving integrated IGC PDM when being created. The file shall be attached in ERWIN (electronic) format to the design specification when completed for delivery.

Each component identified in the Functional Specification should have a corresponding design in the Design Specification. The components in the Design Specification should identify and describe individual pieces required to build the aforementioned components. All connections and data transfer points should be detailed completely by the end of the Design Phase.

1.3 Principles

The Requirements Traceability Matrix should be updated with the mappings from the Design Specification prior to the Design Review. The Design Phase is completed after formal review and approval by the government.

If during the design phase short falls in the tools/services being provided by IGC are identified, it shall be communicated as soon as possible to the Government.

1.4 Configuration Management

The Design Specification upon approval during the formal Design Review shall be placed under configuration control by the Government.

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2.0 Design Specification Sign-off Sheet

Approved by:

Government Sponsor/Customer	Date
Comments:	
IGC Integration Lead	Date
Comments:	
IGC Architecture Lead	Date
Comments:	
IGC PMO Lead	Date
Comments:	
Systems Integrator Lead	Date
Comments:	
Systems Provider Lead	Date
Comments:	

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3.0 Design Specification Document

3.1 Capability Summary

Summarize at a high-level the requested capabilities as they relate to the components identified in the Functional Specification. Include the main design characteristics that will be utilized for the solution.

3.2 Reference Materials

Document all applicable documents referenced in the Design Specification. For example:

- ❖ Requirements Specification
- ❖ Functional Specification
- ❖ DoD 8320.2
- ❖ Etc.

3.3 Overview

Document a general overview of the solution being designed. Include topics such as: Business Intelligence Functionality, Combatant Commanders Questions (COCOM57), Data Warehouse Requirements, Interfaces, Data Transmission, Hardware, DISA Requirements, and Data Volumes.

3.3.1 Solutions Engineering

Describe how the solution will flow through the existing or delivered environments. Diagram how data will begin, transform, and load into the IGC Service. Show transactions by time based or even based signatures.

3.3.2 Diagram

3.3.3 Pedigree Matrix

Build a pedigree matrix that breaks components into modules and sub-modules. The matrix should include a name and number and show whether the module is required or optional.

This matrix essentially helps track components to modules to sub-modules to assure the complete solution will interoperate upon completion.

3.4 Component Descriptions

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Provide a detailed description of each component as identified in the functional specification. Components should be broken down into modules and sub-modules, here the routines; data definition language (DDL), ETL Scripts, Etc. should be detailed to a level of specification that is actionable.

3.4.1 Module Identifier

Create a unique identifier based upon the functional specification component id for each module required to build the component.

1.	Module Identifier	Assign a Module ID that will be referenced in the Requirements Traceability Matrix. The Module ID should be in the format: IIII.ABCD.NNNN.COMP.MODU where IIII.ABCD.NNNN.COMP references the Component ID specified in the Functional Specification and MODU is the unique module identifier. Example: (I.CBIS.0001.0001.0001, III.AFEM.0001.0001.0001)
----	--------------------------	---

3.4.2 Module Function

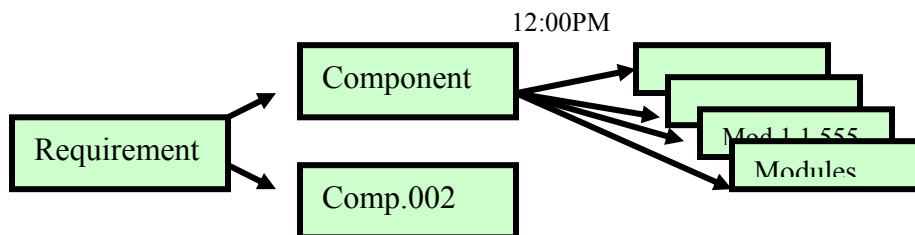
Describe what function the module performs. If a module will be supporting multiple components, be sure to identify that here as well as in the Requirements Traceability Matrix.

3.4.3 Module Specification

Fully detail and attribute the individual modules. This section should include DDL, Code, Command/Call Level Interface Spec, Source to Target ETL Code, Rules, Routines, etc.

3.4.4 Event Execution

Describe event execution level detail, triggers, or time based events for each module. How do loads process, de-normalized tables get created, etc. Be sure to identify system/component/module/sub-module level dependencies.



3.4.5 Business Intelligence Format

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If part of the requirements is for dashboards, reports, scorecards, etc. their format and layout should be detailed here. Headings, descriptions, field placements, definitions, parameters, clauses, calculations, contexts, and aggregations should be designed and documented in this section.

Be sure to base contexts and reports on cardinalities identified in the physical data model. This will help prevent the over/under stating of numbers.

3.4.6 Reference Tables

Identify by component which reference tables within the data warehouse will be utilized. Specify any changes or updates that will be required to support the requested solution.

3.4.7 Calculations

Detail any calculations required by module to support a component.

3.4.8 Interfaces

Identify and detail all interfaces required to support each module. Detail the transmission medium and any relevant information for each file transmitted. DAR Requirements, XML BOD schema, etc. should be detailed in this section.

3.4.9 Load Requirements

Identify and detail any special load requirements. Account for initial load, on-going, and backup or periodic refresh load requirements.

3.4.10 Throughput

Define throughput requirements for each module to support components performance requirements as identified in earlier phases.

3.4.11 Failover Recovery

Detail any failover or error procedures for restarting a module or entire component in process during or after a failure occurs. This section should assure that the order of each loading utility is accounted for and table processing order.

3.4.12 Security

Detail any special security requirements by module and provide the design of the solution in this section. (Special sec_ tables for module)

3.5 Data

3.5.1 Data Descriptions

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Describe files accessed and provide the following:

- ❖ File Identification
- ❖ Function performed (copy, update, insert, delete)
- ❖ Data Dictionary
- ❖ Logging
- ❖ File Layouts
- ❖ Etc

3.5.2 Physical Data Model

Attach the physical schema for building the physical data base. (ERWIN) The PDM should be built utilizing the IGC PDM standards.

3.5.3 Physical Source to Target Mappings

The physical source to target mappings should be created and should work in conjunction with the PDM built in section 5.2. The source to target mappings should be attached as a table or an excel spreadsheet, being fully attributed with all appropriate load routines, business rules, and staging tables identified.

This section should also document the metadata captured during ETL/ELT.

The physical source to target mapping should assure reutilization of all existing services and routines. If an existing load routine is to be edited be sure to identify this to the Operations and Sustainment team of IGC.

3.6 Interface Design

The Interface Design describes the interfaces required to complete the solution.

3.6.1 Interface Name

3.6.2 Interface Description

3.6.3 File Descriptions

- ❖ File name
- ❖ File/record layout
- ❖ Database mapping
- ❖ Business Rules

3.7 Extract, Transform, and Load (ETL)

3.7.1 Data Conversion

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Design and spec out the data conversion required for loading of the IGC environment. This should detail out source to target file and record layouts, any business rules or conversion rules applied, cleansing or purging procedures, and any validation processing.

Map this section back to section 6.0 Interface Design. There should be an ETL design documented for each interface Identified in section 6.0.

3.7.2 Load Procedures

Identify any special load or recovery procedures outside the normal operating range designed in section 7.1.

VERSION DESCRIPTION DOCUMENT

Version Description Document Template

Description: The Version Description Document (VDD) describes a version of a CSCI. This document is used by the Contractor to release CSCI versions to the Government. The term "version" may be applied to the initial release of a CSCI, to a subsequent release of that CSCI, or to one of multiple forms of the CSCI released at approximately the same time (e.g., to different sites). The VDD is used by the Government to track and control versions of software to be released to the operational environment.

Production of this document using automated techniques is encouraged. Charts, tables, matrices, or other presentation styles are acceptable when the information required by the paragraphs and subparagraphs of this document can be made more readable. For hard copy formats, this document may be printed on one or both sides of each page (single-sided/double-sided). All printed pages shall contain the document control number and the date of the document centered at the top of the page. Document control numbers shall include revision and volume identification as applicable.

This document shall contain a table of contents listing the title and page number of each titled paragraph and subparagraph. The table of contents shall then list the title and page number of each figure, table, and appendix, in that order.

The following paragraphs identify the VDD content requirements.

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain the approved identification number, title and, if applicable, abbreviation of the system(s), CSCI(s), and interface(s) to which this VDD applies.

1.2 System overview. This paragraph shall briefly state the purpose of the system and the CSCI to which this VDD applies.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document.

2. Referenced documents. This section shall list by document number and title all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Version description. This section shall be divided into the following paragraphs.

3.1 Inventory of materials released. This paragraph shall list all physical media and associated documentation that make up the new version. This paragraph shall also identify all operation and support documents that are not a part of the delivered package, but that are required to operate, load, or regenerate the CSCI.

3.2 Inventory of CSCI contents. This paragraph shall identify all computer software that is part of the delivered CSCI. This software shall be identified in the same sequence as is used to organize the source code listings for delivery.

3.3 Severity Level I changes installed. This paragraph shall contain a list of all Severity Level I changes (as defined in the PWS) incorporated into the CSCI since the previous version, with a cross reference to the affected CSCI specifications. This paragraph shall also indicate for each entry in this

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list the ECP number and date and the related SCN number and date. Note: This paragraph does not apply to the initial version of a CSCI.

3.4 Severity Level II changes installed. This paragraph shall be numbered 3.4 and shall contain a list of all Severity Level II changes (as defined in the PWS) incorporated into the CSCI since the previous version, with a cross reference to the affected CSCI specifications. This paragraph shall also indicate for each entry in this list the ECP number date and the related SCN number and date. Note: This paragraph does not apply to the initial version of a CSCI.

3.5 Adaptation data. For the initial release of a CSCI, this paragraph shall identify or reference all unique-to-site data contained in the items being delivered. For subsequent CSCI versions, this paragraph shall contain the information necessary to identify changes made to the adaptation data.

3.6 Interface compatibility. This paragraph shall indicate other systems and configuration items affected by the changes incorporated in this version. Note: This paragraph does not apply to the initial version of a CSCI.

4. Bibliography of reference documents. For the initial version of a CSCI, this paragraph shall list all documents pertinent to the CSCI. For subsequent CSCI versions, this paragraph shall identify changes to the listed documents.

5. Summary of change. This paragraph shall contain a subparagraph describing the operational effect of each ECP listed above.

6. Installation instructions. This paragraph shall provide the instructions (either directly or by reference) for installing the CSCI version.

7. Possible problems and known errors. This paragraph shall identify any possible problems or known errors with the CSCI version and any steps being taken to resolve the problems or errors.

8. Notes. This section shall contain any general information that aids in understanding this document, (i.e., background information, glossary). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document.

A. Appendixes. Appendixes may be used to provide information published separately for convenience in document maintenance (e.g. charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling.

INFORMATION ASSURANCE (IA) & INDUSTRIAL SECURITY PLAN

Information Assurance & Industrial Security Plan Template

Description: This template is intended to define the content requirements for generation of the Information Assurance & Industrial Security Plan. The purpose of this plan is to describe the Contractor's strategy and approach for satisfying the IA and Industrial Security requirements defined in the IGC Request for Quote (RFQ) (Section 5) and Performance Work Statement (PWS).

Production of this document using automated techniques is encouraged. Charts, tables, matrices, or other presentation styles are acceptable when the information required by the paragraphs and subparagraphs of this document can be made more readable. For hard copy formats, this document may be printed on one or both sides of each page (single-sided/double-sided). All printed pages shall contain the document control number and the date of the document centered at the top of the page. Document control numbers shall include revision and volume identification as applicable.

This document shall contain a table of contents listing the title and page number of each titled paragraph and subparagraph. The table of contents shall then list the title and page number of each figure, table, and appendix, in that order.

The following paragraphs identify the Information Assurance & Industrial Security Plan content requirements.

1. Scope. The IA & Industrial Security Plan shall describe the Contractor's strategy, processes, and resources for performing the IA and Industrial Security requirements defined in the IGC RFQ (Section 5) and PWS throughout the contract performance period. The information included in this plan shall serve as the basis for implementation of the Contractor's IA & Industrial Security Program.

2. Organization and Roles & Responsibilities. This section shall describe the Contractor's organization(s) responsible for satisfying the IA and Industrial Security contract requirements.

3. Resources. This section shall describe the specific resources involved with implementation of IA and Industrial Security. This section shall also identify the products and tools that will be employed to satisfy the IA and Industrial Security requirements.

4. Referenced documents. Appropriate Government and commercial references shall be provided for processes described within this plan. The Contractor shall attach any internal reference (e.g., policy and procedures) required to assist in clarification of the processes described.

5. Requirements. The IA & Industrial Security Plan shall describe the Contractor's approach for satisfying the following requirements:

- Personnel Security
- IA Training & Certification
- Implementation of IA Management, Operational, and Technical Controls
- Certification and Accreditation (C&A)
- Public Key (PK) Enablement
- JTF-GNO Directives
- Design, development, and implementation of IA controls
- Vulnerability Management

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- Incident Handling
- Information Condition (INFOCON)
- Change Management

5.1. Personnel Security. This section shall describe the Contractor's strategy for satisfying the Government requirements for IT Levels and security clearances. The Contractor shall describe their process for ensuring employees obtain the appropriate security investigations and clearances prior to their assignment to contract tasks. This section shall also describe their strategy for ensuring employees requiring access to the Government systems and/or network obtain Common Access Cards

5.2. IA Training and Certification. This section shall describe the Contractor's strategy for identification of IA certification requirements for each employee, ensuring employees obtain the required IA certification within the designated time frames, and tracking the status of employee IA certifications.

5.3. Implementation of IA Operational, Management, and Technical Controls. This section shall describe the Contractor's approach for identification and implementation of the required IA Operational, Management, and Technical controls for Government and Contractor resources. The Contractor shall describe the processes that will be employed for verification of these controls. The Contractor shall describe the tools that will be employed to implement and maintain these controls. The Contractor shall identify any Government support and resources required to satisfy these requirements.

The Contractor shall identify the processes and controls that will be employed to satisfy the Government requirements for remote access to DoD Computing Environments.

5.4. Certification and Accreditation (C&A). The Contractor shall describe the processes that will be employed for performing certification activities and ensuring sustainment of IGC's accreditation.

5.5. Public Key (PK) Enablement. The Contractor shall describe their strategy for PK Enablement of contractor developed IGC applications.

5.6. JTF-GNO Directives. The Contractor shall describe their strategy for implementing JTF-GNO Directives (to include CTOs and IAVAs) and reporting compliance with these requirements. This strategy shall include processes for compliance reporting (i.e., Vulnerability Management System (VMS)).

5.7. Design, Development and Implementation of IA Controls. The Contractor shall describe their processes for ensuring IA Controls are implemented during the design, development, and implementation of IGC. This description shall address how the Contractor will identify applicable IA controls. The Contractor shall identify the tools that will be employed to support these activities. The Contractor's processes shall address how controls will be evaluated to assess their effectiveness.

5.8. Vulnerability Management. The Contractor shall describe the processes that will be employed to identify vulnerabilities and mitigate their risk. The Contractor's process shall address how vulnerabilities will be reported to the Government. The Contractor shall identify the tools that will be employed to support vulnerability management.

5.9. Incident Handling. The Contractor shall describe their approach for evaluation, isolation and reporting security incidents.

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5.10. Information Condition (INFOCON). This section shall describe the Contractor's approach for responding to changes in INFOCON level. The Contractor's approach shall address how attainment of INFOCON levels will be reported.

5.11. Change Management. The Contractor shall describe the processes that will be employed to evaluate configuration changes for impact on security and the IGC accreditation. The Contractor shall describe how these processes are integrated with their CM and system development activities.